A STUDY OF ACADEMIC SERVICE QUALITY AND INSTRUCTIONAL QUALITY IN A MIDWESTERN HIGHER EDUCATION ENVIRONMENT

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by Keith Greiner
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Notice

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An Abstract of a Dissertation by
Keith Greiner
June 2000
Drake University
Advisor: Thomas Westbrook

The problem: The purpose of this study was to determine if a relationship existed between perceptions of academic service quality and instructional quality in a higher education environment. Academic service was defined as service that is not directly related to the classroom activity. This included adaptations of Parasuraman et al. (1988) constructs of tangibles (i.e. classroom facility) and relationships between student and faculty including reliability, responsiveness, assurance, and empathy. Instructional quality was defined along Marsh's (1982) nine dimensions: learning, enthusiasm, organization, group interaction, individual rapport, breadth, examinations, assignments, and workload/difficulty. Quality was measured along three dimensions suggested by Parasuraman et al. (1985): expected, observed and quality gap between expected and observed.

Procedures: The study employed pre and post surveys of a cohort of 360 students during the fall semester of their higher education experience. The expectation segment was completed at the beginning of the semester and the observed segment was completed after three months. Various statistical analyses were performed including correlations, factor analysis and t-tests.

Findings: The findings included a high correlation between service and instructional quality. Instructional quality formed a separate construct from academic service quality while academic service quality overlapped with instructional quality in three subscales: enthusiasm, organization, and rapport. Workload was not found to be a construct of either instructional or service quality while tangibles were found to be a construct of observed quality, but were not a construct of the gap between expected and observed quality. Expected academic service and instructional quality significantly exceeded observed academic and instructional quality for first year students.

Conclusions: The findings supported conclusions that academic service quality is related to instructional quality. While the relationships exist at overall and subscale levels and across a variety of demographic variables, the factor constructs of instructional quality are clearly distinguished from academic service quality with academic service quality constructs including instructional subscales for interpersonal relationships.

Recommendations: Recommendations for future research included expansion of the study to distance environments, studies of persistence, and participant mood states.

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It has been said that doctoral studies and the doctoral dissertation are a profound developmental and transformational journey. I have found that idea to be true. However, I have also found that the experience builds upon a lifetime of influences from the remote past to the present. It is a journey that could only be accomplished with the help of many friends.

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Chapter 1

INTRODUCTION

We live in a marketing world. Pride and Ferrell (1991) described the idea of a marketing world when they suggested marketing is a fundamental element in the functioning of our society and that individual well-being, lifestyle and economy are influenced by marketing activities. Kotler and Fox (1985) adapted and described the theoretical concepts of marketing to higher education as a “central activity of modern institutions growing out of their quest to effectively serve some area of human need” (p. 7). As marketing has become a key element of our society, and a central activity of higher education, the researcher applied the term, "marketing world-view," to describe the activities of a higher education institution interacting with student customers within an economic marketplace.

This paper applies the marketing world-view concept to higher education for a study of academic service quality and instructional quality in higher education. In this context, academic service quality includes the interaction and service provided by faculty outside the traditional classroom while instructional quality describes the traditional instructional activities that primarily take place within a classroom setting.

Background of the Study

Within the marketing world-view, colleges and universities view themselves as student oriented. Doyle and Newbould (1986) suggested that the idea of a student orientation is consistent with the overriding theme of the importance of marketing. They indicated that institutions must acknowledge that

students constitute a consumer market and “as long as the university has some reliance upon fees, and the student can choose one university over another, the university like the firm is testing itself in the marketplace” (p. 23). For Doyle and Newbould, (1986) the parallels between business marketing and university marketing firmly established a link between a wide variety of business practices and higher education practices. They indicated that management priorities, which have been proven in business, are indeed directly applicable to universities. Shoemaker (1997) advocated the application of business marketing practices to higher education by suggesting that intensive competition for students will mean that those institutions applying sound business marketing practices are more likely to survive into the twenty-first century.

While there are many valuable elements of the higher education marketing process, including pricing and promotion, improved product quality and customer satisfaction continue to be considered two of the fundamental elements of a marketing program within a higher education institution (Kotler & Fox, 1985, p. 34). In fact, Kotler (1967) suggested that a fundamental task of marketing is to improve product quality. Ryans and Shanklin (1986) proposed that the use of marketing principles is appropriate for a college or university because a commitment to marketing is a philosophy of operating an organization to serve people, and colleges and universities are intended to serve the student population (p. 85). This suggests that the fundamental notion of marketing is that “an instructional institution is not created and maintained for the benefit of trustees, administration, faculty, and staff; rather it exists for the satisfaction and

good of the patrons, clients, or customers, better known as students" (p. 85). Pride and Ferrell (1991) provided a theoretical generalization of this idea in their definition of marketing which is to provide goods and services that satisfy both customer and organizational goals (p. 5). The customer goal is the product (education) while the organizational goal is its continued existence.

The notions of product quality and student satisfaction were linked by Astin (1993) who suggested that further research was needed on outcomes assessment that would link assessment with issues of student satisfaction (p. 273). Astin suggested that undergraduate student satisfaction may depend more on environmental experiences at the college than on entering student characteristics (p. 310).

Astin's Theory of Student Involvement advances that undergraduate retention and cognitive and affective development are positively related to activities that closely involve the student with peers, faculty and environment. Students who spend time with instructors outside of class experience more growth, while students who work full-time off campus, or are otherwise isolated, experience less involvement and less cognitive and affective development (p. 394). For Astin, student involvement included campus activities, student organizations, and interaction with faculty and other students. Generally, it is the amount of psychological energy students apply to the experience (p. 134). Astin suggested that one of the most important next steps in developing and testing his student involvement theory is to examine ways to evaluate different forms of involvement (p. 154). Kuh et al. (1991) noted the importance of out-of-class

experience from a student services perspective when they suggested that academic progress is used to account for progress and to award degrees. However they also suggested there is not always a clear distinction between the learning that takes place in a defined area like a classroom and the learning that may take place in a laboratory, library, residence hall, or on-campus job (p. 7). Tinto (1993) found that faculty actions both “within and without the classroom provide the standards by which individuals come to judge the intellectual ethos of the institution” (p. 53). Tinto also found that faculty actions influenced student decisions to continue at the institution.

In general, Astin and Tinto suggest that a student’s satisfaction with the institution extends beyond the walls of the classroom to include the behavior of faculty outside the classroom, as well as other environmental issues and that student outcomes are positively related to out-of-class activities like being a guest in a professor’s home, working on a professor’s research project, or assisting in teaching a class: generally, “hours per week spent talking with faculty outside of class” (Astin, 1993, p. 383).

Statement of the Problem

Although there has been frequent discussion of out-of class and in-class relationships between students and faculty, there has been little empirical research that blends expected and observed performance of service quality and instructional quality together in higher education literature. Devine (1995) studied service quality examining five non-instructional, out-of-class dimensions among first year students at an independent university. The dimensions were tangibles, reliability, responsiveness, assurance, and empathy (p. 121). Devine found significant differences between expected service quality and observed quality in all dimensions with the exception of tangibles (p. 121). In the context of the study limitations, Devine (1995) commented that the SERVQUAL instrument provided valuable information about services (p. 135). Cliff (1994) evaluated a variety of instruments available to study the non-instructional service quality at New Zealand Polytechnics, and concluded that the SERVQUAL instrument would provide the most meaningful data (p. 51). Ruby (1998) examined service quality ratings at ten institutions and found differences in the levels of expected service among four departments: academic records, admissions, career services, and financial aid. Ruby reported that students' perceptions of existing levels of service quality failed to meet their level of expectations in all areas except tangibles (p. 335). Ruby (personal communication, July 20, 1999) agreed that it would be appropriate to examine the correlation between service quality and instructional quality, suggesting that students who were satisfied with service quality might also be satisfied with instructional quality.

Marsh and Roche (1997) focused entirely on the dimensions of instructional quality measured by the Students' Evaluation of Educational Quality (SEEQ) instrument. The instrument measures nine dimensions of instructional quality including: learning, enthusiasm, organization, group interaction, rapport, breadth, exams, assignments and overall workload. Marsh and Roche found that feedback on instructional quality scores helped faculty improve their teaching skills and that when faculty were provided with ratings information, the ratings improved significantly (p. 1).

Banta and Kuh (1998) concluded that there is a need for further research linking in-class and out-of-class influences by suggesting that faculty and student affairs professionals need to discover first-hand the impact of both in-class and out-of-class experiences while faculty and student affairs professionals “need to know where learning occurs and what changes will enhance it” (p. 42). Astin (1985) suggested a system of evaluation that would include student evaluation of instruction, and out-of-classroom contacts between faculty and students as a source of feedback to the faculty. Astin proposed that “faculty members need information not only on their classroom performance but also on their behavior with students outside the classroom” (p. 175).

Pioneering work of Kotler and Fox (1985) brought the subjects together to include the ideas of service quality and instructional quality, under a marketing world-view when they discussed “quality teaching” in conjunction with a discussion of the importance of facilities, architecture, and campus landscape (p. 225). In Kotler and Fox’s higher education world-view, teaching is instructional,

while facilities and architecture are part of service.

Studies of instructional quality suggest a widespread interest in the improvement of instruction. The suggestions of links between in-class and out-of-class experiences suggest that student experiences beyond the classroom influence their satisfaction with the classroom experience as well as their cognitive and affective development. Studies of student development parallel those of consumer products. As with product satisfaction, student satisfaction may also be measured as a relationship between expectations and observed quality.

Purpose of the Study

The purpose of the study was to determine if a relationship exists between perceptions of academic service quality and instructional quality in a higher education environment. In this context the perception of quality is the difference between expected and observed (experienced) service.

Research Questions

The research questions were:

1. Is there a relationship between the perception of instructional quality and academic service quality in a higher education setting?
2. Is there a relationship between the perception of instructional quality subscales and academic service quality subscales in a higher education setting?
3. Is there a relationship between perception of instructional quality and academic service quality as they relate to the independent variables of

gender, age, English as a native language, full-time part-time status, miles from home, high school grade point average, college placement scores, citizenship, and employment?

4. Is there a difference between the expected academic service quality and the observed academic service quality for first year students?
5. Is there a difference between the expected instructional quality and the observed instructional quality for first year students?

Methodology

The study employed pre and post surveys of a cohort of 360 students during the fall semester. Eighty-two percent of the cohort members were in the first semester of their higher education experience. Two instruments were used to collect responses from 245 students. The Parasuraman, Zeithaml and Berry (1988) service quality instrument (SERVQUAL) was used to measure the non-instructional expected and observed academic service quality while Marsh's (1982) Student Evaluation of Educational Quality (SEEQ) was used to measure instructional quality. Both instruments are widely used and have a history of providing reliable data leading to valid conclusions. Expectation segments were completed at the beginning of the experience, and observed quality segments were completed after three months and before the final examination. The students were asked to complete evaluations of expected and observed academic service and instructional quality. The instruments included questions about demographic characteristics. The responses were examined for relationships posed by the research questions. The service quality instrument

(SERVQUAL) included five subscales: tangibles, reliability, responsiveness, assurances including safety, and empathy. The service quality instrument was modified to provide a specific, narrow focus on academic services that may be closely tied to instruction, but are outside the classroom instructional relationship between student and instructor as measured by the SEEQ. The instructional quality instrument (SEEQ) included nine subscales: learning, enthusiasm, organization, group interaction, individual rapport, breadth, examinations, assignments, and workload/difficulty.

The research questions were examined using generally accepted statistical methods appropriate for each question. The first question examined the relationship between instructional quality and academic service quality and was evaluated using correlation analysis. The second question examined the relationship between instructional quality subscales and academic service quality subscales and was evaluated using factor analysis which typically is used to reduce complex correlation matrices. The third question examined the relationship between instructional quality and academic service quality for a variety of demographic variables and was examined using analysis of variance. The fourth question examined the relationship between expected and observed academic service quality among first year students and was evaluated using a paired t statistic. The fifth question examined the relationship between expected and observed instructional quality among first year students and was evaluated using a paired t statistic.

Definitions of Terms

To examine the nature of service quality, instructional quality and associated issues, it is helpful to have a common understanding of terminology and usage. This section defines key terms based upon definitions and usage within the literature and within this dissertation.

Academic Service Quality. The term academic service quality adapts Parasuraman et al. (1988) constructs of service quality to the academic environment. The term is used here to describe selected tangible items in the student environment and non-tangible relationships between instructor and student. Tangible items include the classroom appearance, the instructor's appearance, and the availability of equipment. Non-tangible, academic service relationships include any of four service quality dimensions: reliability, responsiveness, assurance, and empathy applied to the non-instructional portion of the relationship.

Customer Satisfaction. A transactional relationship that is satisfying to customers under the marketing definition. The definition is based upon usage in studies by Fishbein (1967), Howard and Sheth (1969), Olson and Dover (1979), Oliver (1980), Churchill and Suprenant (1982), and Brown and Swartz (1989). Boulding, Kalra, Staelin and Zeithaml (1993) described both satisfaction and service quality and provided the basis for the definitions used in this paper.

Expected Academic Service Quality. The expected academic service quality is the expectation of academic service quality that students bring to the educational experience. The expectation of academic service quality was

measured using a pretest and the SERVQUAL instrument.

Expected Instructional Quality. The expected instructional quality is the expectation of instructional quality that students bring to the classroom. The expectation of instructional quality was measured using a pretest and the SEEQ instrument.

Instructional Quality. The quality of the interaction between faculty and students, primarily taking place in a classroom and intended to either transfer information from faculty to student or facilitate self-motivated student learning processes. Marsh (1982) described instructional quality as "teaching effectiveness." Marsh's instructional instrument includes nine constructs: learning, enthusiasm, organization, group interaction, rapport, breadth, exams, assignments, and workload.

Observed Service Quality. The observed quality of service measured during the posttest using the SERVQUAL instrument.

Observed Instructional Quality. The observed quality of instruction measured during the posttest using the SEEQ instrument.

Marketing. “Marketing consists of individual and organizational activities that facilitate and expedite satisfying exchanges” (Pride & Ferrell, 1991, p. 4).

Quality Gap. A general term for the mathematical difference between any expected and observed quality value. The term, “gap”, is further defined under “Service Quality Gap.”

Service Quality. A collection of satisfaction experiences that have been aggregated into an indication of quality observed over a period of time. This

definition is based upon usage in Parasuraman, Zeithaml, and Berry, (1985, 1988), and Boulding et al. (1993). The idea of service quality may also be referenced as out-of-class quality. The term service quality applied to the academic portion of the environment is described as the academic or non-instructional service quality. The five constructs of service quality are tangibles, reliability, responsiveness, assurance, and empathy.

Service Quality Gap. The mathematical difference between expected and observed service quality. This definition was adopted because of its frequent use in literature including works by Parasuraman et al. (1985, 1988), Hampton (1993), Soutar, McNeil, and Lim (1997) and Hill (1997). However, there are other definitions in the literature. Authors Parasuraman, Zeithaml, and Berry (1985) described five gaps. For example, one of the gaps was between perceived customer expectations and management's understanding of the customer expectations. The definition of quality gap used in this paper is one of the five used by Parasuraman et al.

Limitations

While an ideal study would answer all possible questions about the relationship between academic service quality and instructional quality, that ideal was beyond the scope of this project. Because the study focused on only a few issues, there were limitations including those summarized below.

1. Rather than examine the broad issue of institutional service and instructional quality, this study focused specifically on the relationship of a few specific out-of-class and in-class variables.

2. The cohort sample of 360 students provided information about a group of mostly first year students during their first semester experience, it did not describe the students in a longitudinal manner encompassing the entire collegiate experience. There is speculation that the faculty/student interaction may be different for first year students when compared to second, third or fourth year students. This study did not attempt to identify upperclass perceptions of quality and did not account for the influence of upperclass students in the class surveyed.
3. The study was not intended, nor was it be designed to examine the academic service quality or instructional quality of any specific class, instructor or program.

Summary

This chapter provided a background for the study that included the overall context of a student-focused and marketing-focused college or university. Because a marketing orientation is also a student centered focus, issues of product quality are also important for consideration for colleges and universities. Theorists Banta and Kuh (1998) and Astin (1985) among others, have suggested that there is a need for additional research examining the relationship between in-class and out-of-class activities of faculty. Parasuraman et al. (1985) and Marsh and Roche (1997) provided theoretical dimensions of service and instructional quality and developed widely accepted instruments for use in the study of service and instructional quality. Five research questions were proposed including inquiries into the relationship between academic service

quality and instructional quality, and the relationship between expected and observed quality. The study utilized pre and post surveys of a cohort of students to gather information about expected and observed academic and instructional quality.

Chapter 2

REVIEW OF THE LITERATURE

The purpose of this study was to determine if there was a relationship between expected and observed academic service quality and expected and observed instructional quality in a higher education environment. The quality elements were approached from a marketing world-view where performance is a marketable product.

Review of the Topic

Higher Education Marketing

This section defines marketing in a higher education context and relates the idea to observed customer satisfaction, service quality and observed instructional quality. The chapter examines the relationship between marketing, and observed quality. The combined topics form the basis of a study that is a significant contribution to the higher education literature in three areas of inquiry: marketing, service quality, and instructional quality. The significance of the study is discussed, along with the research questions to be answered.

This review of higher education marketing literature is largely influenced by the work of Philip Kotler and Karen F. A. Fox who, in 1988, published a major work on higher education marketing titled Strategic Marketing for Educational Institutions. Before co-authoring with Fox, Kotler authored a popular text titled, Marketing Management: Analysis, Planning and Control (1967). The education marketing book communicated many of the same marketing principals as the original Kotler work in the context of higher education marketing. Many of the

comments in the higher education marketing book are similar to those in the general marketing text with the alterations needed to incorporate higher education terminology.

Pride and Ferrell (1991) defined marketing as a process that facilitates satisfying exchanges between customers and organizations. The notion of satisfying exchanges represents customer satisfaction, as a state that a person experiences when performance or outcome has fulfilled the customer's expectations (Kotler & Fox, 1985, p. 35). The term "exchanges" is important because it describes the essence of the transaction as a satisfying exchange of money for services: a process that is at the heart of all economic activities. To accomplish the exchange, customers must distinguish one institution from another as they make product selection decisions. Kotler and Fox wrote that an institution's ability to attract enough students depends on the ability of prospective students to distinguish the "quality teaching" of one institution from others and to care enough about that quality teaching to have it determine the choice between available institutions (Kotler & Fox, 1985, p. 225).

Kotler and Fox's observation was intended to focus on instructional quality using the terminology of "quality teaching" as a factor in the selection of a college or university and therefore a factor in the institutional marketing strategy. Kotler and Fox also believed quality encompasses the context of the entire educational environment including buildings, facilities, equipment, and non-instructional staff. For example, Kotler and Fox included a paragraph from William Sturner's (1972)

essay on creating an appropriate environment. Sturner's eloquent words stated the "architecture, topography and landscaping of a campus should support the educational function of the university . . . the campus should evoke the feeling of a tone poem, a festival, a composition that washes over the inhabitants" (Kotler, 1985, p. 225).

Kotler believed that a marketing-oriented institution should be highly responsive to its customer/students, and should seek ways to assess customer satisfaction. One of the key tools of higher education responsiveness is information about the satisfaction levels of "instruction, dorm facilities, food and other areas" (p. 36). In essence, Kotler suggested institutions should bring non-instructional services under one philosophical umbrella called "quality teaching," and should focus on improving the quality of all services. Topor (1983) and Moore (1994) suggested that the higher education product includes both the institutional facilities and the instruction and that demonstrated quality in both areas is essential to success. A number of authors including Devine (1995), Soutar et al. (1996), and Tomkovick, Al-Khatib, Baradway, and Jones. (1996), supported the idea by suggesting there is a need for further examination of satisfaction and service quality provided by higher education administrative services. Devine proposed "exploration of possible new dimensions unique to the higher education community appear to be warranted" (p.140).

Berry, Bennett, and Brown (1989) and Brown and Swartz (1989) indicated that any organization receives five benefits by including service quality in the marketing plan: stronger customer loyalty, more repeat business, reduced

vulnerability to price wars, ability to command a higher relative price without affecting market share, lower marketing cost, and growth in market share (p. 7).

Biner, Dean, and Mellinger (1994) expanded on the idea that excellent service quality is a valuable element of the higher education product. The group clarified the nature of higher education quality based upon what it does for the institution. Although their work applied specifically to distance learning services, the basic ideas seemingly apply to a broad range of higher education programs. For example, the authors proposed that institutional benefits include lower student attrition rates, greater number of referrals from enrolled students, higher levels of student motivation, greater commitment to the program, and better learning (Biner et al., 1994, p. 61).

With quality teaching (instruction) and customer (student) satisfaction established as substantial parts of the higher education marketing process, this review will continue by looking more deeply into the nature of and evaluation of service quality, customer satisfaction and student evaluation of instructional quality.

Customer Satisfaction/Service Quality

This section describes basic elements of customer satisfaction and service quality related to the marketing of higher education products.

Service quality literature utilizes two themes: service quality and customer satisfaction. The differences between the two are basically a matter of degree. Studies by Fishbein (1967), Howard and Sheth (1969), Olson and Dover (1979), Oliver (1980), Churchill and Suprenant (1982), and Brown and Swartz (1989) described the nature of a specific transactional relationship often described as customer satisfaction. The satisfaction construct is the elementary building block of more global service quality issues. Boulding et al. (1993) described the relationship between satisfaction and service quality by examining both constructs and proposed a service quality model that they said was compatible with, although not identical to, transaction-specific satisfaction (p. 8). Their model is more of a transaction to transaction aggregation model and will be described below. Parasuraman, Zeithaml and Berry (1985, 1988) recognized that satisfaction is a transaction level issue and that service quality is more global, as they focused their applicable research, development of the SERVQUAL instrument, on service quality as a global concept. SERVQUAL is an abbreviation for the term applied to a survey instrument developed by Parasuraman, Zeithaml and Berry in 1985. In the view of Boulding as well as Parasuraman, Zeithaml and Berry, a collection of satisfaction experiences will eventually aggregate into an indication of observed service quality.

Typical models of satisfaction focus on customer expectations compared

to observed delivered service. The difference between the two is often described as the disconfirmation (Oliver, 1980) or service quality gap (Parasuraman et al., 1985; Hampton, 1993; Soutar et al., 1996; Hill, 1997).

Boulding, Kalra, Staelin, and Zeithaml (1993) suggested that the perception of service quality is a function of three elements: prior expectations of what should occur, together with prior expectations of what will occur, compared to actual delivered service (Boulding, 1993).

The Boulding model suggested that a service provider can change the level of satisfaction by changing the level of expectation, and by changing ratings of either should or will. If an organization were to lower customer's expectations, then the gap between expectation and service provided would be reduced. On the other hand, if an organization were to raise the level of service provided, the service quality gap would also be reduced and the resulting improved satisfaction value would be the same.

Although a transaction event that results in customer satisfaction may occur only once, communication and interaction between customers and service providers takes place over an extended period of time. Boulding et al. (1993) suggested satisfaction is a cumulative construct and that a customer updates his or her notion of satisfaction each time the person is exposed to the service (p. 10). The cumulative nature of service quality was examined by Howard and Sheth (1969) and by Oliver (1980). Their models assumed that people make summary comparative judgments that become inputs into observed satisfaction (Oliver, p. 460). Oliver's model incorporated prepurchase attitude, and

satisfaction, and the impact on the next purchase decision.

Parasuraman et al. (1988) built a model that described the entire organization in five service quality dimensions:

1. Tangibles: Physical facilities, equipment and appearance of personnel,
2. Reliability: Ability to perform the promised service dependably and accurately,
3. Responsiveness: Willingness to help customers and provide prompt service,
4. Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence,
5. Empathy: Caring, individualized attention the organization provides its customers. (Parasuraman et al., 1988, p. 23)

Devine (1995) examined the Parasuraman et al. model as it related to a large independent university and concluded that gaps occurred in all dimensions except tangibles. Although Devine's study was successful at a university-wide level, the researcher recommended that the study of service quality would provide improved information if applied to a smaller unit of the university. Ruby (1998) used the instrument to examine service quality at four departments. Ruby found significant gaps in service quality (the difference between expected and observed service quality) in all service quality dimensions except tangibles.

Student Evaluation of Instructional Quality - Historical Overview

While customer satisfaction issues are seen as a marketing era concern, having developed since the 1950s (Pride & Ferrell, 1991, p. 14), the notion of teaching quality and effectiveness dates to ancient times. Xenophon (1861)

wrote that some observers attributed Socrates' downfall in 399 BC to the idea that Socrates should not have taught politics before teaching self-control (p. 357). Doyle (1983) traced concerns for teaching effectiveness to 350 AD. Jean-Jaques Rousseau wrote about child-centered instruction in his novel Emile, published in 1762. Rousseau suggested that the practice of memorization was inappropriate and that instruction should focus on the need for naturalistic experiences (Gutek, 1997). Johann Heinrich Pestalozzi was influenced by Rousseau's work, and it is said that, in 1799, Pestalozzi was assigned to be the assistant to Samuel Dysli, a more traditional instructor. The two disagreed so intensely that parents and members of the community became involved, voicing opinions about how the students should be taught. Pestalozzi was dismissed: a step that delayed development of student-centered ideas of teaching and learning (p. 144).

Modern interest in teacher effectiveness was summarized by Marsh (1987, p. 257) who referenced published studies as early as 1905 and acknowledged Barr (1948, p. 203) who identified 138 published articles between 1905 and 1948. Marsh tallied over 1,000 articles on the subject using an ERIC system search ranging in date from 1976 through 1984. A tabulation of ERIC listings in March 1999 used Marsh's original search key words and found 1,230 articles. Cashin (1995) tallied over 1,500 references available from a variety of sources.

A purposeful sample of articles (Creswell, 1998, p. 62) showed researchers' interest in the validity of student evaluation of instruction as well as

student and course characteristics and the utility of student evaluations. One of the most cited studies used factor analysis of student statements about characteristics of quality instruction. The statements were factor analyzed into groups: learning, enthusiasm, organization, group interaction, individual rapport, breadth, examinations, assignments, workload/difficulty, and overall rating (Marsh, 1982). The analysis included over 500,000 evaluations of 20,000 UCLA courses in 50 academic departments over a six year period. Coefficient alpha values ranged from 0.88 to 0.97. Long term stability was established when selected students were asked to re-evaluate instruction a year after completion. Observations of instructional outcomes were also validated by comparing the ratings of instructional quality with standard test scores and with faculty evaluations of the course.

Cashin (1995) identified five variables that are not related to ratings including gender, age, grade level, GPA and personality. Doyle (1983) suggested a positive personality orientation results in improved instructional ratings. Nasser and Glassman (1994) suggested that a student who takes a class because of an interest in the subject or who takes a class as an elective will tend to rate the course higher than others. Cashin's (1995) research also suggested student evaluations should be part of the total course and instructional evaluation process. Generally, Cohen's (1981) meta-analysis of 41 independent validity studies concluded that objective measures of student perceptions of instructional quality are a valid measure of instructional quality.

Typically, student evaluations are used for diagnostic feedback, to

measure teaching effectiveness, to provide information for students, for course improvement and for research on teaching (Marsh, 1987). The notion of providing information for students was an accepted practice at some institutions where it was an outgrowth of demands for increased accountability to student consumers beginning in the 1960s (Williams & Ceci, 1997). The demand for consumer information supports Kotler's suggestions that instructional quality and customer feedback processes are important to the future of colleges and universities in a competitive marketplace.

Demographic Variables Used in This Study

The demographic variables selected for this study followed generally accepted practice. The availability of student demographic information allowed a comparative analysis of typical student characteristics in the context of both academic service and instructional quality. Although surveys examining service quality or instructional quality often include demographic data, results of analyses of the data do not become highlighted focus issues for the studies. Devine (1995) for example, surveyed first year students at an independent university, and included demographic factors of age, gender, and on-campus residence, but described the results of differences between responses of students versus faculty.

A collection of suitable, generally accepted, student demographic questions was found in the Cooperative Institutional Research Program's 1999 Freshman Survey (University of California, 1999). The survey is conducted by the UCLA Higher Education Research Institute in cooperation with the American Council on

Education. The survey of college freshmen has been conducted at participating institutions since 1966. The 1998 survey included almost 276,000 freshmen from 469 higher education institutions (University of California, 1998). This study used nine questions adapted from the freshman survey. The questions cover the following subjects: gender, age, English as a native language, year graduated from high school, full-time or part-time status, distance from home, high school grade point average, college entrance exam score, and citizenship status.

In addition to these questions, Hood, Craig, and Ferguson (1992) suggested student employment is a demographic issue that is appropriate for investigation. Gender was an issue for Kohlberg (1984), Gilligan (1977), Hood et al. (1992), and Kuh (1990). Astin (1976) proposed gender as an input variable for collecting a variety of data about the characteristics of first year students. Seventeen years later, Astin (1993) reported that being female was positively related to self-reported student satisfaction. Age was examined by Kuh (1990) and Knowles (1984), with Knowles proposing that the in-class techniques for persons over about age 18 should be different from techniques used for younger students. Knowles posited that by the time a person reaches adulthood the sense of dependency becomes very low and “readiness to learn” (p. 55) and a “self-concept of essential self-direction” (p. 56) require a different style of teaching and learning defined as “andragogy” (p. 54). Ethnicity was discussed by Kuh (1990), and Hood et al. (1992). Astin (1993) reported that distance from home, not just living away from home, was positively related to satisfaction with the higher education product. Astin also reported that satisfaction was positively

related to high school grade point averages, college entrance exam scores and college grade point averages. Full-time and part-time status and student employment, and college entrance scores were also examined by Hood et al. (1992), and citizenship was examined by Kuh (1990). Tinto (1993) found that external contacts are predictors of persistence for undergraduate juniors and seniors especially the accessibility and contact students have with faculty outside class, the helpfulness of faculty and the concerns faculty show for students (p. 53).

Sample Size Considerations

In the most ideal sense, the data used for any analysis would include the entire universe of subjects. For a study of university service quality, the ideal would include all students enrolled in the institution and inferential statistics would be unnecessary. That being impractical, the researcher considered a sample that would represent the total. A completely random or systematic sample would need to be of an appropriate size to allow the researcher to infer qualities about the general population and should be a subset of a known population (Wright, 1979). In circumstances where an entire population cannot be identified, researchers may consider a cluster sample where data are gathered from an identifiable group representing the entire population. A purposeful subgroup would have a unique characteristic that is relevant to the topic of inquiry and whose study serves a purpose of shedding light on the research question (Creswell, 1998). Tinto (1993) suggested that first year students may experience academic difficulties, social isolation, and a sense of bewilderment which presents

problems for the individual and are possible root causes of early withdrawal from college (p. 46). Tinto's focus on first year students suggests this subgroup would have unique characteristics that would shed light on the research questions.

One of the most difficult considerations is sample size. Wright (1979, p. 30) suggested the sample depends on the nature of the analysis to be performed and the desired precision. Demming (1960) suggested the sample must be cost-effective and not so large that the cost of collection overshadows the benefit of the data collected. This study used a cost-effective sample with a purposeful focus of primarily first year students. Three hundred sixty students in an introductory biology class completed a survey of expectations. Three months later, the survey of observed experiences was administered to the same class. Two hundred forty-five students completed both surveys. One hundred ninety-eight of the students identified themselves as being in their first year at this instituiton and represented 23.6% of the Fall, 1999 first year class of 840 students (U. S. Department of Education, 1999).

Discussion/Significance of the Topic

This section summarizes the relationships between academic service quality and instructional quality. The purpose is to bring them together identifying a previously unexplored region of the marketing, instructional quality, service quality and higher education milieu.

A typical higher education organization, has many levels of tasks with each level below the president becoming progressively more specific (Mackenzie, 1989, p. 37). When viewed from the "strategic apex" (Mintzberg,

1989, p. 99), the task levels may be divided into successively smaller organizational constructs based upon a functional division of labor or suborganizations based upon task or functionality in models described by Mintzberg (1989) and Bolman and Deal (1997). The models place administration at the top, because it represents the strategic apex: the part of an organization with the most global strategic view. Marketing usually falls below the strategic apex, because it has a strategic impact on all divisions of the organization. On the same level with marketing there are various products which, for an educational institution, would include instruction and academic services. In the context of this study, “instruction” suggests things that are closely associated with classroom teaching theoretically described by Passmore (1980) who described a teacher as a person who “can teach to somebody-in-a-classroom [sic]" (p. 33). For purposes of this study, “academic service” describes the group of activities that take place between faculty and students outside the classroom.

Product development involves the improvement of any one of the products either separately or as collective groups. In this model, classroom instruction and academic service can be related as products along side and interrelated with the library, computer services, food services, buildings and grounds and other non-classroom products. All of the products have some form of quality. The quality of the classroom experience, is called "instructional quality" based upon the work of Marsh (1982; 1987), Marsh and Roche (1997), and others who have investigated the topic. The quality of other products is called "academic service quality" based upon the work of Kotler and Fox (1985), Boulding et al. (1993), and others.

Academic service quality is a global concept because it occurs in both instructional and non-instructional settings, and may be deconstructed into service quality in the aggregated organizational sense, and satisfaction in the context of a specific transaction or event. There is an overlap between higher education and instructional quality and service quality when a customer (student) experiences any of the higher education products including instruction, departmental staff, university administrative services, buildings, grounds, equipment and other elements of the instructional product. The experience may be a single transaction, an event, or a collection of events. Howard and Sheth (1969), Oliver (1980), Parasuraman et al. (1988), Boulding et al. (1993), and Devine (1995) suggested that further research is needed along the boundaries of the known world in these overlapping issues. Devine, in particular, suggested studies of “new dimensions unique to the higher education community (p. 140)” and proposed that studies should “focus directly on [student] perceptions” (p. 142).

The issues described above were connected into a chain of logic that suggested a simultaneous inquiry into service quality and instructional quality would extend the boundary of the known world and improve understanding of both issues. The chain of logic connected service and instructional quality to a focused research problem. It included the elements summarized below.

1. Kotler and Fox (1985) indicated a theoretical marketing-focused connection between service and instructional quality.
2. Devine (1995) indirectly suggested a combined study of service and

instructional quality would be appropriate, if the instrument were appropriate.

3. Devine (1995) further suggested that future studies should focus on a specific campus service setting (p. 144).
4. Ruby (1999) suggested that it would be appropriate to examine the relationship between service quality and instructional quality.
5. Both Devine (1995) and Ruby (1999) studied first-year students and found differences in all service quality dimensions except tangibles.
6. Banta and Kuh (1998) suggested faculty alone cannot accomplish both intellectual and personal development.
7. Astin (1985) suggested out-of-class contacts are important as a source and subject of feedback.
8. Astin (1993) suggested a study should examine the expectations of entering first year students.
9. Ruby (1999) suggested a link between instructional quality and service quality would be beneficial.
10. Snedecor and Cochran (1967) suggested the correlation tool to compare two hypothetically related variables.

From the discussion, and the logical chain presented above, it was determined that the boundary of knowledge could be extended by a study that would examine the relationship between academic service quality and instructional quality. The study would focus on a single aspect of the relationship by enlarging on Devine's (1995) suggestion that service quality studies would benefit from a focus on a single service setting. Placing examination of academic

service and instructional quality together, responds to Devine's suggestion while connecting the notions of service quality and instructional quality.

Research Questions

This section examines the boundaries of the central issues of academic service quality, and instructional quality. It concludes with a logically derived set of research questions.

The intersecting boundaries between each pair of central issues has been well researched. Kotler and Fox (1985) examined the world-view of marketing and progressed to a narrowed view of higher education and service quality. Biner et al. (1994), and Devine (1995) examined service quality, and Kotler (1985) and Doyle (1983) discussed issues of instructional quality and service quality. None of the authors simultaneously examined all three issues. The following questions were developed to explore the nature of the three issues as one holistic inquiry, primarily focusing on academic and service quality issues within a global context of marketing.

The research questions are shown below:

1. Is there a relationship between the perception of instructional quality and academic service quality in a higher education setting? This is the key question that examines the blended ideas of service and instruction.
2. Is there a relationship between the perception of instructional quality subscales and academic service quality subscales in a higher education setting? This question provides a narrower focus on possible relationships between elements of the two key constructs.
3. Is there a relationship between perception of instructional quality and academic service quality as they relate to the independent variables of

gender, age, English as a native language, full-time part-time status, miles from home, high school grade point average, college placement scores, citizenship, and employment? This question examines whether there is a relationship between service and instructional quality along generally accepted demographic segments.

4. Is there a difference between the expected academic service quality and the observed academic service quality for first year students? This question examines the nature and impact of the first semester experience specifically for the students identified by Tinto (1993) as experiencing the greatest need for adjustment within the first six to eight weeks of their college experience (p. 46).
5. Is there a difference between the expected instructional quality and the observed instructional quality for first year students? This question examines the first semester experience in the same manner as question 4, and addresses the student/instructor relationship.

Instrumentation

Two well established instruments were available for use in the study. The instruments were selected for three reasons. First, each was designed to explore one of the quality issues of interest to this study. Second, each was in the public domain and its use was economical. Third, the instrument developers supported the use of the instruments for this study. The two instruments used were the SERVQUAL, and the SEEQ. The following sections describe each instrument.

This study combined the SERVQUAL, and SEEQ instruments into one

operational instrument with two parts. Students completing the questionnaire during the first week of the Fall semester classroom experience were asked to respond to expectation versions of the SERVQUAL and SEEQ instruments. The expectation data were used to calculate the service quality gap needed to measure the overall instructional and non-instructional service quality. At a later date, respondents were asked to respond to the SERVQUAL and SEEQ questions to gather data describing their observations of experienced service quality and instructional quality.

Service Quality: The SERVQUAL

The SERVQUAL instrument was designed by Parasuraman, Zeithaml, and Berry (1988) to measure the dimensions of service quality. The creators intended for the instrument to be modified by subsequent researchers who would use it to examine service quality in a wide variety of organizational situations. Two researchers found the SERVQUAL to be helpful in higher education. Devine (1995) applied the SERVQUAL instrument to higher education and found significant gaps in all dimensions except tangibles. Ruby (1998) applied the instrument to ten colleges and also found significant gaps in all dimensions except tangibles. Comments from two pilot focus groups suggested that students can describe and analyze their personal perception of the quality of service received from the institution. The SERVQUAL, with minor modifications, was appropriate for measurement of the academic service quality portion of the study.

Parasuraman et al. developed the instrument based upon a series of focus group meetings where participants generated 97 items describing their

perception of service quality. The items were refined using mall intercept interviews of 200 shoppers from five service categories: appliance repair and maintenance, retail banking, long distance telephone, securities brokerage and credit cards. The quota sample size was selected as a continuation of precedents established by scale developers in the marketing arena. The service categories were selected purposefully to represent a broad cross-section of retail services that were most likely to vary along key dimensions. Originally, ten dimensions were found: tangibles, reliability, responsiveness, communication, credibility, security, competency, courtesy, understanding/knowing the customer, and access (p. 18).

During a second-stage analysis, items with low item-to-total correlations were eliminated, resulting in the collapse of categories: communication, credibility, security, competency, courtesy, and access into two categories labeled assurance and empathy. The final five dimensions were: tangibles, reliability, responsiveness, assurance, and empathy.

Parasuraman et al. evaluated the reliability of the factor structures for each industry. Table 1 shows the consistency across each industry for each of the five final service quality dimensions.

Table 1

Internal Consistencies for SERVQUAL by Industry Evaluated (Parasuraman et al., 1988)

	Bank	Credit Card	Repair and Maintenance	Long Distance Telephone
Tangibles	.52	.62	.64	.64
Reliability	.80	.78	.84	.74
Responsiveness	.72	.69	.76	.70
Assurance	.84	.80	.87	.94
Empathy	.71	.80	.72	.76

To assess convergent validity the creators of SERVQUAL compared responses to each of the scores ranging from excellent to good and whether the respondents would recommend the service to a friend. The validity was examined using one-way ANOVA tests. Respondents rating higher scores in each of the subcategorizes also provided significantly higher overall scores.

The authors recommended that the questionnaire may be adapted and used across a wide variety of organizations. Kotler and Fox (1985) recommend use of the SERVQUAL in studies of higher education services and Linda Devine (1995) used an adapted version of the questionnaire in an independent university setting. Ruby (1998) used an adapted version at ten independent higher education institutions, and examined higher education departments of academic records, admissions, career services and financial aid.

Instructional Quality: The SEEQ

The Students' Evaluation of Educational Quality, (SEEQ) instrument has a long history of development, dating to the early 1970s (Marsh, 1982). The

development included a large number of responses, and is clearly the most comprehensive of the instruments used in this study. There has been extensive validation beyond the original work. The instrument originated with faculty concerns about instructional quality at UCLA. A task force on the evaluation of teaching examined higher education evaluation practices in place at the time, and proceeded to develop this new measurement tool. The task force first developed an extensive item pool that served as a basis for refinement and validation. Pilot studies were used to test the pool in a variety of academic departments. During the early studies, student evaluators rated not only the course, but also the importance of each question on the instrument. Open-ended comments were reviewed to determine if other important aspects of the experience should be included. Construct validity was evaluated by responses from instructors using the same instrument to evaluate each class. After several revisions of the instrument, four criteria were used to select the items to be included in the production version: student ratings of each question, staff ratings of question usefulness, factor analysis, and item reliability.

During the next six years a half million instruments were completed by UCLA students in over 20,000 courses. Marsh (1997) estimated the instrument had been used over a million times in over 50,000 courses by 1997. The data supplied from the evaluation forms were used as teaching feedback and tenure and promotion decisions. Results were published at UCLA for student use when selecting a course. The nine factors that are now part of the SEEQ instrument are: learning, enthusiasm, organization, group interaction, individual rapport,

breadth of coverage, examinations/graded material, assignments, and overall workload.

Variables

The two instruments used for this dissertation study offered extensive opportunities for analysis in either a positivist or emergent tradition. The SERVQUAL provided 22 variables yielding one service quality score and five dimensional subscales. Each question on the SERVQUAL provided responses on a seven point Likert scale. The SEEQ provided 33 variables yielding one instructional quality score and nine dimensional subscales. Each question on the SEEQ provided responses on a five point Likert scale.

Summary

This review of literature introduced the idea that marketing concepts can serve higher education students by emphasizing instructional quality and service quality. Building upon that base, is the market-driven need to provide high quality service in all aspects of the higher education product. The entire entity of the instructional institution, therefore includes two product supportive elements: the milieu outside the classroom, and the instructional activity inside the classroom. The idea of quality was narrowed to include academic service, which is the service portion of the instructor/student relationship. This study of the relationship between student ratings of non-classroom and classroom quality provided insight into the congruency of these two elements of the learning process. The research project utilized well-tested instruments to measure expected and observed quality outside and inside the classroom. First is the SERVQUAL: a service

quality instrument originally developed for business, and adapted to higher education. Second is the SEEQ: an instructional quality instrument known to facilitate valid conclusions. A better understanding of the service and instructional quality relationship may be accomplished by understanding basic student demographics. The following chapter describes methodology of how these concepts and instruments were utilized to accomplish the study.

Chapter 3

METHODOLOGY

This chapter describes the methodology used to achieve the purpose of this dissertation study and to answer the research questions. The purpose of the study was to determine if there was a relationship between perceptions of service quality and instructional quality in a higher education environment. In this context the perception of quality is the difference between expected and observed quality.

The research questions were:

1. Is there a relationship between the perception of instructional quality and academic service quality in a higher education setting?
2. Is there a relationship between the perception of instructional quality subscales and academic service quality subscales in a higher education setting?
3. Is there a relationship between perception of instructional quality and academic service quality as they relate to the independent variables of gender, age, English as a native language, full-time part-time status, miles from home, high school grade point average, college placement scores, citizenship, and employment?
4. Is there a difference between the expected academic service quality and the observed academic service quality for first year students?
5. Is there a difference between the expected instructional quality and the observed instructional quality for first year students?

Study Design

Instrument

The study utilized two questionnaires: the SERVQUAL, and the SEEQ presented for completion in two parts. Expectation portions were completed during the first week of classes. Observed quality portions were completed near the end of the fall semester. The participants were instructed to consider not just the class in which the questionnaire was completed, but all classes taken during the semester. The questionnaires included a selection of demographic questions, divided between the first and second survey packages. Copies of questionnaires are included in Appendix B and
Appendix C.

Sample

The sample used for this study was a cohort of 360 undergraduate students at a leading midwestern private university. Two hundred-forty-five students completed both the first, expected quality, questionnaire and the second, observed quality questionnaire. Eighty-two percent (198) of the students were in the fall term of their first year at the institution. All the students were participants in a required, introductory biology class. The students were asked to consider not just this class, but all service and academic experiences of their first-semester.

Data Collection

Data were collected in the final twenty minutes of a one-hour lecture class. The pretest/expectation questionnaire consisted of responses describing the student expectations of service and instructional quality in the coming semester. The posttest/observation questionnaire was completed near the end of the semester and consisted of responses describing the student experience of service and instructional quality during. All students were advised of the confidential nature of the study and of their right to withdraw without any form of prejudice whatsoever. The students were asked to include the last four digits of their social security numbers on both questionnaires as anonymous identifiers to be used to match responses from the first questionnaire with the second questionnaire. Each student was asked to complete a release to participate in the study. Completed releases were separated immediately from the questionnaires with no possible way to correlate the two.

Procedures

The study was conducted in two parts. Ratings of expected service and instructional quality were collected in a pretest during the first week of a fall semester in an introductory biology lecture class, while observed, ratings were collected near the end of the semester, but before the final examination. Students were asked to complete a release to participate. The releases were printed on a separate page and although collected in the same box, were immediately separated with no possible way to match names or releases with response questionnaires. Students were instructed to consider their expectations

(experiences in the posttest) for all classes, not just the class in which the questionnaires were completed. Student responses to the expected and observed, posttest ratings were matched on a one-for-one basis using the last four digits of the social security number. Summary expected, observed and difference scores were calculated for 14 subscales. Three hundred and sixty students participated in the pretest expectation portion of the survey and 245 of those students took the posttest survey of observed service and instructional quality. Data from completed questionnaires were entered into a Microsoft Excel spreadsheet and transferred to a Microsoft Access database for storage and analysis. A correlation matrix was created in Excel and analyzed for factor structures using SAS as the primary tool and SPSS as a secondary verification tool. Table 8 in the Appendix summarizes the demographic characteristics of those who responded to both the pretest and the posttest instruments. Details of the demographic characteristics will be explained in the analysis section that describes Research Question 3.

Analysis

This section describes the analysis and statistical tests applied to data collected from the participating students. In general, acceptance of significance was based upon a generally accepted level of $p < 0.05$ suggested by Williams (1968, p. 61).

The first research question examined the relationship between academic service quality and instructional quality. Snedecor and Cochran (1967), and Williams (1968) described correlation as an appropriate measure of the

relationship between two variables. Snedecor and Cochran also suggested the significance of a single correlation value, when compared to a zero correlation may be evaluated using a t statistic. The correlation and t statistic were considered as appropriate for this purpose.

The second research question examined the relationship between academic service quality and instructional quality at the subscale level. Again the use of correlation was appropriate. However, the combination of all possible correlations resulted in three 14 x 14 matrices shown in Tables A11 through A13 of the Appendix. Comrey and Lee (1992) and Kline (1997) suggested that factor analysis is appropriate to reduce complex correlation matrices to meaningful theoretical factor constructs. Factor analysis was used for that purpose in this analysis.

The third research question examined the relationship between academic service quality and instructional quality as the two are influenced by demographic independent variables. Again the use of the term “relationship” suggested correlation analysis. In addition, the dependent variables for academic service quality and instructional quality utilized mean rating scores. Williams (1968) suggested that analysis of variance is appropriate in this circumstance. The analysis of these data included both correlation and analysis of variance.

The fourth research question examined the difference between expected and observed academic service quality. Both Snedecor and Cochran (1967) and Williams (1968) suggested an appropriate method for analysis of two average scores is to use the paired t statistic. The t statistic was seen appropriate for this

analysis.

The fifth research question examined the difference between expected and observed instructional quality. Again, Snedecor and Cochran (1967) and Williams (1968) suggested an appropriate method is the paired t statistic, and again it was used to evaluate this question.

Summary

This chapter described the methodology used in the study including a selection of a purposeful and convenient sample of mostly first year students. The students were given a two part pretest posttest survey of questions developed by Parasuraman et al. and Marsh. The tabulated results were stored in Microsoft Excel a spreadsheet and a Microsoft Access database where they were analyzed using correlation analysis, analysis of variance, factor analysis, and the t statistic. SAS and SPSS were used for the factor analyses.

Chapter 4

ANALYSIS OF THE DATA

This chapter presents the demographic characteristics of the respondents and results of the analysis of expected quality, observed quality and quality gap for both instructional and service quality. The purpose of the study was to determine if there was a relationship between academic service quality and instructional quality in a higher education environment. The relationship was operationalized as a correlation statistic. In this context quality is the difference between the expected and observed quality on scales developed by Parasuraman et al. (1988) and Marsh et al. (1997). This chapter presents results in all three elements of quality: expected quality measured by a pretest, observed quality measured by a posttest, and the quality gap measured by the difference between pretest and posttest scores.

The pretest included responses from 360 individuals while the posttest included responses from 268 individuals. Two hundred forty-five responses matched between the pretest and posttest surveys, thus providing sufficient data to examine expected, observed and gap relationships. The posttest survey occurred on a Friday before a Thanksgiving holiday break, and students who did not respond most likely were away from campus for the break. Despite the difference in the number of responses, averages of key expectation scores did not result in significant differences between the 245 responses from students who were present for both the pretest and the posttest and the other 115 responses from students who were present only during the pretest. The average

service quality score for the 245 matching respondents was 5.81 on a seven point Likert scale while the score for 115 non-matching respondents was 5.77. The average instructional quality score was 4.37 on a five point Likert scale for both the matching and non-matching respondents. The averages for service quality and instructional quality for these tests were compared using a t statistic and were not found to be significant with $p < 0.01$. Although the service quality scale was a seven point Likert scale and the instructional quality scale was a five point Likert scale, neither scale was adjusted because the t tests compared like scales and the use of two scales did not impact correlation calculations.

Eighteen individuals dropped the class during the semester. Eight of those individuals completed the pretest. The average service quality score of the eight was 5.64 and the average educational quality score was 4.44. The averages for service quality and instructional quality were compared to the averages for responses from individuals completing both the pretest and posttest using a t statistic and were not found to be significant with

$p < 0.01$.

Respondents who completed both the pretest and posttest were predominantly female and included 169 (69.0%) female and 75 (31%) male. Almost all of the respondents were full-time while nine of every ten were under age twenty. Eight of every ten were first-year students. Table 2 summarizes the key demographics with additional details available in Tables A1 through A5.

Table 2
Selected of Demographic Variables

Gender	Frequency	Percent
Male	76	31.0%
Female	169	69.0%
Total	245	100.0%

Enrollment Status	Frequency	Percent
Full-Time	244	99.6%
Part-Time	1	0.4%
Total	245	100.0%

Age	Frequency	Percent
17	1	0.4%
18	120	49.2%
19	99	40.6%
20 and over	24	9.8%
Total	244	100.0%

Year in College	Frequency	Percent
First	198	82.2%
Second	29	12.0%
Third	8	3.3%
Fourth	5	2.1%
Fifth	1	.4%
Total	241	100.0%

Analysis

The following paragraphs state each research question followed by results of the analyses. The results include those items that were relevant to the topic or were statistically significant. Correlations were completed in a pairwise manner. Some correlations include 245 cases while others include only 244 cases because one case had missing data.

Research Question 1

Is there a relationship between the perception of instructional quality and academic service quality in a higher education setting?

Table 3 shows a comparison of the three correlation coefficients that respond to the first question. Each correlation describes the linear relationship between the academic service quality and the instructional service quality. The three correlation coefficients are presented in a timeline order from the pretest expectation survey to the quality gap (difference between expected and observed) to the posttest survey of observed experiences. The correlation relationship increased from expected to observed quality. Both the quality gap value and the observed quality correlations were significantly different from a zero correlation beyond the one percent level of confidence. The t scores of 10.76, 16.46 and 23.79 exceeded the critical t value of 1.96.

The existence of correlations that Williams (1968) would describe as “substantial,” to “marked” (p. 134), and t scores that exceed the critical value suggest there is a relationship between the perception of instructional quality and

academic service quality in the higher education setting examined.

Table 3
Correlation of Academic Service Quality and Instructional Quality

	r	95% Confidence Interval	N	t	p
Expected	0.51959	.098	245	10.76	0.000*
Gap	0.63289	.075	244	16.46	0.000*
Observed	0.72489	.076	244	23.79	0.000*

* t is significant at the .05 level.

Research Question 2

Is there a relationship between the perception of instructional quality subscales and academic service quality subscales in a higher education setting?

The question was addressed using correlation matrices for all subscale variables in the expected, gap and observed groups as shown in Appendix A Tables 8a through 8c. Subscale correlations from the service and instructional instruments were factor analyzed using a principal components method and four rotation alternatives: equamax, orthomax, parsimax and varimax. The selected subscales excluded the average service quality and average instructional quality subscales because they are aggregates of other subscales. All four factor analysis methods resulted in the same factor relationships although there were slight variations in the factor weights. Factor weights represent the correlation of the variable with the factor. As correlations, factor weights greater than or equal to 0.40 were selected for inclusion in factor constructs because Comrey and Lee

(1992) suggested the frequently used cutoff of 0.30 is inadequate while Williams (1968) suggested correlations of 0.40 represent a substantial relationship. Table 4 includes all factor weights and Table 5 shows the weights greater than or equal to 0.40 that were included in each of the three areas of analysis.

Expected Quality. The factor constructs for expected service quality included elements from both the service quality and instructional quality survey questionnaires. Factor 1 included service scales: tangibles, reliability, and assurance as well as the instructional scales for enthusiasm, organization, rapport and examinations. Thus, three of the five service quality subscales were included in Factor 1 while four of the nine instructional quality subscales were included. Factor 2 showed a clear distinction between service quality and instructional quality. In this factor, none of the service quality subscales were included while five of the nine instructional quality subscales were included. The description of results for quality gap and observed quality will show that this pattern moved to Factor 1 for those two stages of the analysis. Factor 3 emphasized service quality as three of the five service quality subscales were included and only one of the instructional quality subscales was included. The discussion for quality gap and observed quality will show this same pattern in Factor 2.

Quality gap. The quality gap is the difference between the expected quality and the observed quality. The gap was analyzed using the same factor analysis procedures as those used to examine expectation. Factor 1 included a high level of discrimination between the SERVQUAL and SEEQ questionnaires

and, therefore, seemingly discriminates between constructs of service quality and instructional quality. On the service quality side, none of the five subscales were included in Factor 1, while eight of the nine instructional quality subscales were included. Only the instructional factor for overall workload was excluded.

Factor 2 showed a markedly different view. Four of the five service subscales were included plus the instructional scales for enthusiasm, organization and group interaction. Factor 3 recognized three subscales of which two were not included in either Factor 1 or Factor 2. This included the tangibles subscale, which was negatively weighted, the learning subscale which also was included in Factor 1, and the instructional overall workload subscale.

Observed quality. The observed quality was examined in the same manner as the expected quality and the quality gap. The factor structure of the observed quality was found to be identical to the quality gap with two notable exceptions. First the SAS program did not include a third factor solution. The first two were identical to the quality gap solution with the addition of the service assurance subscale which was included in the observed quality solution for Factor 1, but not the quality gap solution for Factor 1. Although the assurance subscale was included because it was greater than 0.40, it exceeded the lower cutoff by only 0.00338. In addition, the Factor 2 solution for observed quality included the service quality tangibles subscale, while the quality gap solution did not include tangibles.

These observations suggest two forms of relationship between the academic service quality and instructional quality subscales.

First, instructional quality was perceived to be conceptually separate and distinct from academic service quality. Second, service quality was perceived to be largely separate from instructional quality with three common elements; enthusiasm, organization and rapport.

Table 4
Equamax Rotated Factor Solutions for Subscale Factor Scores

Variable	Expected Quality			Quality Gap			Observed Quality	
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2
Tangibles	0.69923	0.00851	0.14705	0.36755	0.32778	-0.41409	0.09265	0.57308
Reliability	0.50861	0.05798	0.48253	0.28594	0.72381	-0.16452	0.10432	0.84372
Responsiveness	0.07405	0.02503	0.76601	0.09758	0.76869	0.12291	0.28740	0.74672
Assurance	0.59337	0.11234	0.12999	0.27820	0.45826	-0.02898	0.40338	0.50428
Empathy	0.01936	0.07479	0.84643	0.05158	0.79086	0.12683	0.33736	0.68941
Learning	0.13891	0.72787	0.12339	0.45924	0.34796	0.53393	0.74492	0.34410
Enthusiasm	0.72179	0.22910	0.05668	0.59762	0.46942	0.06040	0.60711	0.51519
Organization	0.66637	0.22349	0.11779	0.62893	0.40723	0.14365	0.63097	0.54283
Group Interaction	0.17328	0.52505	0.22924	0.56808	0.14086	0.10231	0.71811	0.18771
Rapport	0.53798	0.27332	0.47297	0.50318	0.64286	-0.08927	0.55828	0.65361
Breadth	0.37437	0.57667	0.05128	0.60303	0.25707	0.11374	0.72906	0.32227
Exams	0.41940	0.33695	0.33367	0.64566	0.24985	-0.16587	0.61829	0.37508
Assignments	0.32012	0.58195	-0.06149	0.72877	0.02791	0.05683	0.67227	0.28204
Workload	-0.23735	0.68458	0.03253	0.08220	0.01543	0.86362	0.62807	-0.01947
Explained variance	2.88419	2.25828	2.00194	3.16433	3.12759	1.34789	4.28779	3.79286

Table 5
Equamax Rotated Factor Solutions for Subscale Factor Scores >=0.40

Source		Expected Quality			Quality Gap			Observed Quality	
Instrument	Variable	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2
SERVQUAL	Tangibles	0.69923					-0.41409		0.57308
SERVQUAL	Reliability	0.50861		0.48253		0.72381			0.84372
SERVQUAL	Responsiveness			0.76601		0.76869			0.74672
SERVQUAL	Assurance	0.59337				0.45826		0.40338	0.50428
SERVQUAL	Empathy			0.84643		0.79086			0.68941
SEEQ	Learning		0.72787		0.45924		0.53393	0.74492	
SEEQ	Enthusiasm	0.72179			0.59762	0.46942		0.60711	0.51519
SEEQ	Organization	0.66637			0.62893	0.40723		0.63097	0.54283
SEEQ	Group Interaction		0.52505		0.56808			0.71811	
SEEQ	Rapport	0.53798		0.47297	0.50318	0.64286		0.55828	0.65361
SEEQ	Breadth		0.57667		0.60303			0.72906	
SEEQ	Exams	0.41940			0.64566			0.61829	
SEEQ	Assignments		0.58195		0.72877			0.67227	
SEEQ	Workload		0.68458				0.86362	0.62807	
	Explained by selected	2.53004	1.94534	1.75975	2.85114	2.74971	1.20239	4.07192	3.31475
	Explained by all	2.88419	2.25828	2.00194	3.16433	3.12759	1.34789	4.28779	3.79286
	Unexplained by selected	0.35414	0.31295	0.24219	0.31319	0.37788	0.14550	0.21588	0.47811
	Percent explained by selected	87.7%	86.1%	87.9%	90.1%	87.9%	89.2%	95.0%	87.4%

Research Question 3

Is there a relationship between perception of instructional quality and academic service quality as they relate to the independent variables of gender, age, English as a native language, full-time versus part-time status, miles from home, high school grade point average, college placement scores, citizenship, and employment?

The third research question asked if there was a relationship between perception of instructional quality and academic service quality compared to gender, age, English as a native language, full-time part-time status, miles from home, high school grade point average, college placement scores, citizenship, and employment. Frequency tabulations presented in the Appendix, Table 8, showed that more than 96% of the responses for three variables were in one response category. Therefore the variables for English as a native language, full-time status and citizenship were not explored further. The remaining variables were analyzed using ANOVA and only two variable pairs showed significance of $p < 0.05$. The two, sex compared to observed average service, and sex compared to expected average education which are summarized in Table 6. The significance of the two categories was found in analyses using both Microsoft Excel and SPSS. Although these two variable pairs had significant values of F they had low correlation values and did not demonstrate a meaningful pattern. Therefore, they may have been the result of random variation among the 30 pairs examined. It is a situation described by Wilkinson et al. (1999) in their guidelines for the use of statistical methods in psychological journals. Wilkinson suggested

researchers must be wary of such random occurrences as sources of misleading conclusions.

Table 6
ANOVA for Selected Demographic Variables

Variables		r	F	p
Sex	Observed Average Service Quality	0.181	8.217	0.005*
Sex	Expected Average Educational Quality	0.141	4.920	0.027*

* t is significant at the .05 level.

None of the remaining variables (sex, age, miles from home, high school grade point average, ACT score, and full-time/part-time status) provided significant results. The observations, viewed from the perspective of Wilkinson's caveat, suggest no meaningful relationship between the academic service quality or instructional quality and the demographic variables examined.

Research Question 4

Is there a difference between the expected academic service quality and the observed academic service quality for first year students?

This question was addressed using a paired t test of the mean expected and observed service quality scores. The means shown in Table 7 provided a t value of 9.085 with 198 degrees of freedom and $p < .001$.

An analysis of the t scores also suggested there was a significant difference between the expected and observed academic service quality in three of the five subscales. Those with significance included tangibles, reliability, and assurance. The responsiveness and empathy subscales provided p values greater then .05. Three demographic variables were selected for further analysis

based upon their distribution across two nominal or ordinal categories. The three were sex, ACT score, and distance from home. For these three variables, non-significant values occurred in the responsiveness and empathy subscales. Details of the demographic variables and t scores are shown in Tables A6 through A9.

The data suggest there is a difference between expected and observed academic service quality for first year students, although the difference is not significant for the academic service subscales of responsiveness and empathy.

Research Question 5

Is there a difference between the expected instructional quality and the observed instructional quality for first year students?

This question was addressed using a paired t test of the mean expected and observed instructional quality scores. The means shown in Table 7 provided a t value of 14.811 with 197 degrees of freedom and $p < .001$. The t values suggest there was indeed a significant difference between the expected and observed instructional service quality. The significance occurred not only with the generalized, average score examined in response to this question, but also to the instructional subscales of learning, enthusiasm, organization, group interaction, rapport, breadth, examinations, assignments, and overall workload.

Three demographic variables were selected for further analysis based upon their distribution across two nominal or ordinal categories. The three were sex, ACT score, and distance from home. For these three variables, non-significant values occurred in the overall workload and breadth subscales. Details

of the demographic variables and t scores are shown in Tables A6 through A9.

The data suggest there is a difference between expected and observed instructional quality for first year students, although the difference is not significant for some selections of subscales for breadth and overall workload.

Table 7
Comparison of Expected and Observed Quality

	Expected	Observed	N	r	t	p
Service Quality	5.80	5.26	198	0.134	9.085	0.001*
Instructional Quality	4.37	3.87	197	0.262	14.811	0.001*

* t is significant at the .05 level.

Chapter 5

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This section reviews the findings in the context of the study purpose and the five research questions. It concludes with implications for administration of higher education and recommendations for additional research.

Summary of Findings

This section summarizes the findings reported in the analysis chapter. There are five specific findings summarized in order of the five research questions.

1. The correlation between academic service and instructional quality ranged from 0.52 for expected quality, to 0.63 for the quality gap, to 0.72 for the observed quality. The findings suggest there is a relationship between the perception of instructional quality and academic service quality in the higher education setting examined.
2. A factor analysis of the relationship between academic service and instructional quality showed three factors. The first factor consisted of only instructional quality. The second factor consisted of four service quality subscales and three instructional quality subscales. Within this factor, the duplicative subscales were in the instructional group: enthusiasm, organization and rapport. The service quality tangibles subscale was part of a relatively weak third factor in the quality gap analysis, and also was part of the service quality subscale in the analysis of observed quality. The observations suggest two forms of relationship between academic service quality and

instructional quality. First, instructional quality is a separate construct from academic service quality. However, academic service quality includes three elements that are also part of instructional quality. The three are the instructor's enthusiasm, organization, and rapport.

3. Significance tests comparing academic service and instructional quality for demographic variables indicated significance in only two comparisons: sex compared to observed average service quality, and sex compared to expected average educational quality. However, the correlations of variables in these two comparisons were below 0.20. Applying the caveat offered by Wilkinson et al. (1999), the researcher concluded there is insufficient support to suggest a significant relationship between selected demographic variables and the perception of academic service and instructional quality.
4. A comparison of expected and observed academic service quality perceptions for first year students found significant differences in average scores and three of five subscale scores. Significance in subscale scores included tangibles, reliability and assurance, but did not include responsiveness or empathy for all of the three demographic variables analyzed. This suggests that overall expectation exceeded observed quality, with two occasional exceptions: responsiveness and empathy.
5. A comparison of expected and observed instructional quality for first year students found significant differences in average scores and four of the five subscale scores for all summary and subscale comparisons analyzed except workload. This suggests that overall expectation exceeded observed

instructional quality, with one occasional exception: overall workload.

Discussion

The purpose of this study was to determine if there is a relationship between perceptions of academic service quality and instructional quality in a higher education environment. Academic service quality was defined to be service that is not directly related to the classroom instructional activity, but is part of the provider/customer relationship. In the university context, academic service quality included the classroom facility, equipment, and various relationships between faculty and student. The Parasuraman et al. constructs of service quality include tangibles, reliability, responsiveness, assurance, and empathy. The difference between service and instructional quality was examined by comparing the Parasuraman et al. (1988) theoretical constructs of service shown above with Marsh's (1982) academic quality constructs developed for use in a traditional university classroom setting. Marsh's constructs were learning, enthusiasm, organization, group interaction, individual rapport, breadth, examinations, assignments, and overall workload/difficulty. The quality of service was measured using the Boulding et al. (1993) and Parasuraman et al. (1985, 1988) methods which examined differences between customer expectations of what should occur and what the customer actually observes. Therefore, the actual service quality rating is the gap between expected quality and observed quality.

This study was used to consider whether the service quality is the same or a separate construct from instructional quality by examining the relationship

between the two using the Parasuraman et al. (1988) SERVQUAL instrument for service quality and Marsh's (1982) SEEQ instrument for instructional quality. This relationship was examined by seeking answers to five research questions shown below.

1. Is there a relationship between the perception of instructional quality and academic service quality in a higher education setting?
2. Is there a relationship between the perception of instructional quality subscales and academic service quality subscales in a higher education setting?
3. Is there a relationship between perception of instructional quality and academic service quality as they relate to the independent variables of gender, age, English as a native language, full-time part-time status, miles from home, high school grade point average, college placement scores, citizenship, and employment?
4. Is there a difference between the expected academic service quality and the observed academic service quality for first year students?
5. Is there a difference between the expected instructional quality and the observed instructional quality for first year students?

Clearly there was a significant relationship between service quality and instructional quality observed in the three correlations summarized in Table 3. All three correlations were significant with $p < .001$ for expected quality, observed quality and the quality gap. The correlations ranging between 0.52 and 0.72 describe a possible connection between in-class activities and this small step

outside the classroom. As a research step in the direction of a continuum extending from the classroom to the higher education ethos the correlation supports Tinto's (1993) suggestion that faculty actions outside of class influence how students "come to judge the intellectual ethos of the institution" (p. 53).

The nature of the relationship between service and instructional quality as described in Table 5 may be interpreted in several ways. First, it appears that instructional quality and service quality are separate theoretical constructs because the second factor in the expected quality score, and the first factor in both the observed quality and the quality gap scores discriminate between responses from the two survey instruments. The factors discriminate between service and instructional quality constructs. At the same time, the third factor in the expected quality score and the second factors in both the quality gap and observed quality scores show somewhat of an ability to discriminate in the opposite direction. Clearly, the construct of academic service quality included at least four of the five Parasuraman et al. constructs of service quality and the instructional quality constructs of enthusiasm, organization and rapport summarized in Table 5. The overlap of the service quality factor with the instructional quality factor supports the Kuh et al. (1991) suggestion that the demarcation between non-classroom and classroom services may indeed be diminishing when viewed from the service side. However, the two may be separate constructs when viewed from an instructional perspective. The appearance of tangibles in a quality gap construct separate from both service and instructional quality suggests a possible disconnect with the milieu. The

architecture of the institution may be less connected than suggested by Kotler and Fox (1985). It does not suggest the facilities have little importance, only that the customers distinguished facilities from human relationships. Additional research is needed to explore this relationship.

Although there were relationships between academic service and instructional quality, the relationships did not separate on demographic variables of sex, age, English as a native language, full-time versus part-time status, miles from home, high school grade point average, college placement scores, citizenship, or employment. Some of this lack of separation along demographic variables was due to a substantially unbalanced sample for characteristics like English as a native language and full-time versus part-time employment status. Other variables like sex, age, miles from home, high school grade point average ACT score and full-time versus part-time enrollment status simply did not separate at an acceptable level of significance. The lack of relationship between academic service quality and instructional quality and various demographic characteristics supports Cashin's (1995) finding that gender and grade level are not related to ratings while contrasting with Astin's (1993) suggestion that females reported higher ratings of instruction.

To summarize the overall relationship between expected and observed quality, the paired t-tests indicated a significant difference exists between the two measurements. The observed level of quality was significantly less than the expected level of quality for both service and academic measurements. This is consistent with the Zeithaml, Parasuraman, and Berry (1990) proposal that

attention should be paid to the difference between expected and observed quality. In addition, the finding here is consistent with Ruby's (1998) finding that students' expectations of service quality exceed their observed quality. The notable difference between this study and Ruby's findings is that these data indicated the difference between expected and observed responsiveness was not significant, while Ruby found the difference between expected and observed tangibles was not significant. The discrepancy between these data and Ruby's findings may be due to the services studied. Ruby examined departments of academic records, admissions, career services and financial aid, while this study focused on academic service quality. In general, the differences between expected and observed quality means the experience of an academic environment does not meet the expectations of incoming students.

Conclusions

The following conclusions arose from the findings.

1. Students perceptions of academic service quality are related to their perceptions of instructional quality.
2. Students perceive instruction as a construct separate from service quality.
3. Some of the service quality constructs are also instructional quality constructs.
4. Perception of academic service quality and instructional quality are similar across a variety of student demographic characteristics.
5. First year students' observation of academic service quality falls below their expectations.

6. First year students' observation of instructional quality falls below their expectations.

Recommendations for Future Research

As this project was completed, a number of possible avenues for future research surfaced. Following is a list of those suggestions in the hope that future investigators might consider them as ways to advance the knowledge of service quality and instructional quality, uncovering important elements of marketing theory and more specifically the marketing of higher education products.

The literature on student affect suggested that responses to evaluation instruments like the SERVQUAL or the SEEQ might be influenced by the mood of the person completing the questionnaire. Future studies might investigate the nature of affect (mood) on responses to these particular survey instruments.

The two instruments were developed to measure face-to-face service and instructional experiences. However, the modern environment includes products and services, of an instructional and retail nature, which are provided at a distance via communications channels like the Iowa Communications Network or the internet. It would be appropriate for future investigators to develop modified instruments to adequately measure distance relationships within the universal theoretical constructs of the Parasuraman et al. service quality and Marsh's instructional quality.

The introduction to this dissertation was developed around a framework of marketing where the university is seen as a provider of instructional services while the student is seen as a consumer. The focus of this research project

precluded the area of marketing that focuses on consumer decision-making. For example, it is not known how the expectation, experience, and service quality gap might affect student decisions to persist at the institution or to persist in a higher education degree program. Boulding et al. (1993) suggested that service quality includes three elements: expectations of what should occur, versus expectations of what will occur, versus observations of what occurs. Future research might include a study of the “should,” “will,” and “observed” aspects of academic service and instructional quality.

It is known that eighteen of the original 360 people dropped out of the class during the course of the semester and there was no significant difference between the average expectation scores of those who dropped and those who remained. This aspect of persistence could benefit from a study that includes larger numbers of students who dropped a class. Since the researcher was unable to follow-up on the individuals who dropped, it is not known what impact the quality of instruction or service had on their decision to withdraw. An understanding of the relationship between observed quality and disconfirmation could also benefit from a longitudinal study that follows these same students for the remainder of their academic careers at this institution. Also, it is not known what impact the individuals’ mood state had on their decision to withdraw.

These are important areas of future study that would benefit theory and practice of a marketing oriented university. Knowledge of the topics might help counselors who work with the individuals who no longer have the opportunity to continue at this university.

This study found a significant gap between expected and observed service quality among first year students. It would be appropriate for a future study to examine why the gap appeared and whether the presence of a statistically significant gap indicates a meaningful gap for consumers. Furure research might also examine how the presence of the gap might influence future expectations.

Implications for Higher Education Administration

This paper began by drawing upon the idea of a marketing world-view partially because this view leads us to think of the students as customers. As Kotler and Fox (1985) suggested “responsive educational institutions aim to create satisfaction” (p. 34). The notion of satisfaction lead this researcher to ponder the nature of satisfaction as the difference between expected and observed quality. Quality, in turn, was divided into academic service quality and instructional quality. Academic service quality was measured using the SERVQUAL instrument and instructional quality was measured using the SEEQ instrument. From the examination of quality in this context five questions were developed to investigate the relationship between instructional quality and academic service quality. Relationships were found in four of the five questions. It was discovered that service quality and instructional quality each has its own theoretical constructs and although instructional quality appears to be limited to one group of constructs, service quality extends beyond service into some of the constructs of instructional quality. Significant differences were found in comparisons between the expected quality and the quality observed by first year students. Higher education administrators might consider these concepts as they

create marketing strategies for modern institutions. The strength of the relationships suggests administrators should consider the importance of both service and instructional quality when communicating the nature of an individual institution to prospective and current customers, better known as students. Faculty and administrators might also wish to contemplate the notions of instructional and academic service quality as they develop and present instructional programs. Finally, it is suggested that faculty and administrators consider building upon this project and these concepts to extend the ideas of quality in higher education and the quality of the experience for future learners. That consideration is the essence of facilitating satisfying exchanges and is the essence of marketing higher education products with a marketing world-view.

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Appendix A

This appendix includes tables summarizing the demographic characteristics of respondents, a cross-reference of questions and subscales and tables of correlation matrices of the service and instructional quality subscales.

Table A1
Summary of Demographic Variables

Class Section	Frequency	Percent
9:00 AM	148	60.4%
11:00 AM	97	39.6%
Total	245	100.0%

Gender	Frequency	Percent
Male	76	31.0%
Female	169	69.0%
Total	245	100.0%

Native Language	Frequency	Percent
English	235	95.9%
Other	10	4.1%
Total	245	100.0%

Enrollment Status	Frequency	Percent
Full-Time	244	99.6%
Part-Time	1	0.4%
Total	245	100.0%

Table A2
Summary of Demographic Variables

Age	Frequency	Percent
17	1	0.4%
18	120	49.0%
19	99	40.4%
20	9	3.7%
21	7	2.9%
22	3	1.2%
23	0	0.0%
24	0	0.0%
25	1	0.4%
26	0	0.0%
27	1	0.4%
28	1	0.4%
40	0	0.0%
Greater than 40	2	0.8%
No Response	1	0.4%
Total	245	100.0%

Year Graduated from High School	Frequency	Percent
1999	200	81.6%
1998	24	9.8%
1997	9	3.7%
1996 or earlier	11	4.5%
Received a G. E. D.	1	0.4%
Total	245	100.0%

Table A3
Summary of Demographic Variables

Miles from Permanent Home	Frequency	Percent
5 or less	13	5.3%
6 - 10	16	6.5%
11 - 50	16	6.5%
51-100	16	6.5%
101-500	140	57.1%
Over 500	44	18.0%
Total	245	100.0%

Average Grade in High School	Frequency	Percent
A or A+	2	0.8%
A-	104	42.4%
B+	57	23.3%
B	50	20.4%
B-	23	9.4%
C+	5	2.0%
C	3	1.2%
D	1	0.4%
G. E. D.	0	0.0%
Total	245	100.0%

Table A4
Summary of Demographic Variables

ACT Composite Score	Frequency	Percent
No Answer	23	9.4%
17	1	0.4%
18	3	1.2%
19	0	0.0%
20	3	1.2%
21	15	6.1%
22	16	6.5%
23	26	10.6%
24	29	11.8%
25	19	7.8%
26	20	8.2%
27	24	9.8%
28	24	9.8%
29	15	6.1%
30	11	4.5%
31	5	2.0%
32	5	2.0%
33	5	2.0%
34	1	0.4%
Total	245	100.0%

SAT	Frequency	Percent
Reported SAT Score	46	18.8%
Did not Report an SAT Score	199	81.2%
Total	245	100.0%

Table A5
Summary of Demographic Variables

Citizenship	Frequency	Percent
U. S. Citizen	239	97.6%
Permanent Resident	3	1.2%
Other	3	1.2%
Total	245	100.0%

Employment Status	Frequency	Percent
Full-time	10	4.1%
Part-Time	126	51.4%
Neither	109	44.5%
Total	245	100.0%

Year in College	Frequency	Percent
First	198	82.2%
Second	29	12.0%
Third	8	3.3%
Fourth	5	2.1%
Fifth	1	.4%
Total	241	100.0%

Table A6
Expected and Observed Subscale Average Values -- Freshman Students

	Expected	Observed	Change	p
Service Quality				
Tangibles	5.65	5.03	-0.62	0.000
Reliability	6.38	5.52	-0.86	0.000
Responsiveness	5.45	5.33	-0.12	0.210
Assurance	6.42	5.59	-0.83	0.000
Empathy	5.13	4.88	-0.25	0.012
Average Service	5.80	5.26	-0.54	0.000
Instructional Quality				
Learning	4.50	4.03	-0.48	0.000
Enthusiasm	4.48	3.83	-0.64	0.000
Organization	4.49	3.84	-0.64	0.000
Group Interaction	4.46	4.02	-0.43	0.000
Rapport	4.49	3.93	-0.57	0.000
Breadth	4.19	3.91	-0.28	0.000
Exams	4.76	3.96	-0.80	0.000
Assignments	4.36	3.69	-0.67	0.000
Workload	3.72	3.62	-0.10	0.014
Average Instruction	4.37	3.87	-0.50	0.000

N = 198

Displayed change may be different from actual expected minus observed, due to rounding.

Table A7

Selected Expected and Observed Subscale Average Values -- Freshman Students

	Male				Female			
	Expected	Observed	Change	p	Expected	Observed	Change	p
Service Quality								
Tangibles	5.59	5.07	-0.52	0.002	5.68	5.01	-0.67	0.000
Reliability	6.28	5.41	-0.87	0.000	6.43	5.57	-0.86	0.000
Responsiveness	5.25	5.09	-0.16	0.422	5.54	5.43	-0.11	0.329
Assurance	6.37	5.45	-0.92	0.000	6.44	5.65	-0.79	0.000
Empathy	5.00	4.64	-0.36	0.063	5.18	4.98	-0.20	0.076
Average Service	5.69	5.12	-0.57	0.000	5.85	5.32	-0.52	0.000
Instructional Quality								
Learning	4.50	3.94	-0.55	0.000	4.51	4.06	-0.44	0.000
Enthusiasm	4.47	3.83	-0.63	0.000	4.48	3.84	-0.65	0.000
Organization	4.44	3.70	-0.74	0.000	4.51	3.91	-0.60	0.000
Group Interaction	4.44	4.03	-0.40	0.002	4.46	4.02	-0.44	0.000
Rapport	4.41	3.80	-0.60	0.000	4.53	3.98	-0.55	0.000
Breadth	4.24	3.85	-0.38	0.002	4.17	3.93	-0.23	0.001
Exams	4.67	3.92	-0.75	0.000	4.79	3.98	-0.81	0.000
Assignments	4.20	3.68	-0.53	0.001	4.42	3.70	-0.72	0.000
Workload	3.73	3.51	-0.22	0.022	3.72	3.66	-0.05	0.228
Average Instruction	4.34	3.81	-0.54	0.000	4.38	3.90	-0.48	0.000

Tabulations include 60 males and 138 females. Displayed change may be different from actual expected minus observed, due to rounding.

Table A8
Selected Expected and Observed Subscale Average Values -- Freshman Students

	Fifty miles from home or less				Fifty-one miles from home or greater			
	Expected	Observed	Change	p	Expected	Observed	Change	p
Service Quality								
Tangibles	5.90	5.11	-0.79	0.000	5.61	5.02	-0.59	0.000
Reliability	6.54	5.34	-1.20	0.000	6.35	5.55	-0.80	0.000
Responsiveness	5.75	5.37	-0.38	0.082	5.39	5.32	-0.07	0.505
Assurance	6.69	5.53	-1.16	0.000	6.37	5.60	-0.76	0.000
Empathy	5.18	4.74	-0.44	0.103	5.12	4.90	-0.21	0.046
Average Service	6.00	5.20	-0.80	0.000	5.76	5.27	-0.49	0.000
Instructional Quality								
Learning	4.48	3.95	-0.54	0.000	4.51	4.04	-0.47	0.000
Enthusiasm	4.66	3.73	-0.92	0.000	4.44	3.85	-0.59	0.000
Organization	4.60	3.71	-0.89	0.000	4.46	3.87	-0.60	0.000
Group Interaction	4.43	3.99	-0.44	0.003	4.46	4.03	-0.43	0.000
Rapport	4.60	3.79	-0.81	0.000	4.47	3.95	-0.52	0.000
Breadth	4.30	3.86	-0.44	0.002	4.17	3.92	-0.25	0.000
Exams	4.82	3.83	-0.99	0.000	4.74	3.99	-0.76	0.000
Assignments	4.41	3.59	-0.81	0.000	4.35	3.71	-0.64	0.000
Workload	3.63	3.75	0.13	0.138	3.74	3.59	-0.15	0.002
Average Instruction	4.43	3.81	-0.62	0.000	4.36	3.89	-0.47	0.000

Tabulations include 32 respondents fifty miles fromhome or less and 166 respoondents 51 miles from home or more. Displayed change may be different from actual expected minus observed, due to rounding.

Table A9
Selected Expected and Observed Subscale Average Values -- Freshman Students

	ACT scores 25 and under				ACT scores 26 and over			
	Expected	Observed	Change	p	Expected	Observed	Change	p
Service Quality								
Tangibles	5.72	5.05	-0.68	0.000	5.62	5.01	-0.61	0.000
Reliability	6.41	5.40	-1.00	0.000	6.38	5.58	-0.80	0.000
Responsiveness	5.48	5.24	-0.23	0.129	5.42	5.37	-0.05	0.692
Assurance	6.44	5.48	-0.96	0.000	6.41	5.68	-0.73	0.000
Empathy	4.99	4.82	-0.17	0.271	5.31	4.87	-0.43	0.001
Average Service	5.80	5.19	-0.61	0.000	5.83	5.29	-0.53	0.000
IInstructional Quality								
Learning	4.43	3.96	-0.47	0.000	4.60	4.12	-0.48	0.000
Enthusiasm	4.56	3.75	0.81	0.000	4.40	3.93	-0.48	0.000
Organization	4.47	3.78	-0.70	0.000	4.48	3.91	-0.57	0.000
Group Interaction	4.43	4.07	-0.36	0.000	4.51	3.99	-0.51	0.000
Rapport	4.51	3.90	-0.62	0.000	4.47	3.92	-0.55	0.000
Breadth	4.29	3.86	-0.43	0.000	4.09	3.95	-0.14	0.084
Exams	4.73	3.96	-0.77	0.000	4.79	3.97	-0.82	0.000
Assignments	4.43	3.71	-0.72	0.000	4.29	3.67	-0.63	0.000
Workload	3.68	3.60	-0.08	0.207	3.77	3.61	-0.16	0.005
Average Instruction	4.38	3.84	-0.54	0.000	4.37	3.90	-0.46	0.000

Tablulations include 94 students with ACT scores 25 or under and 92 students with ACT scores of 26 or greater. Displayed change may be different from actual expected minus observed, due to rounding.

Table A10
Scale, Subscale and Question Number Cross-Reference

	Number on the Questionnaires
SERVQUAL	
Tangibles	1,2,3,4
Reliability	5,6,7,8,9
Responsiveness	10, 11, 12, 13 (Negatively Scaled)
Assurance	14, 15, 16, 17
Empathy	18, 19, 20, 21, 22 (Negatively Scaled)
SEEQ	
Learning	23, 24, 215, 26
Enthusiasm	27, 28, 29, 30
Organization	31, 32, 33, 34
Group Interaction	35, 36, 37, 38
Individual Rapport	39, 40, 41, 42
Breadth	43, 44, 45, 46
Examinations	47, 48, 49
Assignments	50, 51
Overall Workload	52, 53, 54, 55

Table A11
Correlation of Service Quality and Instructional Quality Subscales for Expected Quality Responses

	SERVQUAL Subscales						SEEQ Subscales									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Tangibles	1.00															
2. Reliability	0.45	1.00														
3. Responsiveness	0.22	0.31	1.00													
4. Assurance	0.35	0.31	0.16	1.00												
5. Empathy	0.11	0.34	0.44	0.14	1.00											
6. Avg. Service	0.61	0.70	0.69	0.55	0.70	1.00										
7. Learning	0.19	0.19	0.14	0.19	0.16	0.26	1.00									
8. Enthusiasm	0.44	0.30	0.14	0.39	0.13	0.40	0.29	1.00								
9. Organization	0.34	0.37	0.19	0.33	0.15	0.40	0.27	0.42	1.00							
10. Group Interact'n	0.18	0.23	0.10	0.22	0.20	0.28	0.33	0.26	0.16	1.00						
11. Rapport	0.35	0.39	0.28	0.35	0.44	0.56	0.27	0.49	0.42	0.33	1.00					
12. Breadth	0.22	0.26	0.09	0.15	0.16	0.26	0.40	0.42	0.35	0.28	0.37	1.00				
13. Exams	0.22	0.33	0.25	0.26	0.23	0.39	0.23	0.32	0.40	0.31	0.47	0.29	1.00			
14. Assignments	0.19	0.15	0.09	0.22	0.04	0.19	0.32	0.21	0.35	0.23	0.29	0.38	0.33	1.00		
15. Workload	0.00	0.03	0.06	0.08	0.01	0.05	0.34	0.04	0.02	0.17	0.05	0.16	0.09	0.19	1.00	
16. Avg. Education	0.40	0.41	0.24	0.40	0.28	0.51	0.65	0.67	0.62	0.57	0.69	0.71	0.58	0.56	0.33	1.00

Table A12
Correlation of Service Quality and Instructional Quality Subscales for Quality Gap Responses

	SERVQUAL Subscales						SEEQ Subscales									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Tangibles	1.00															
2. Reliability	0.44	1.00														
3. Responsiveness	0.19	0.49	1.00													
4. Assurance	0.25	0.31	0.28	1.00												
5. Empathy	0.14	0.46	0.49	026	1.00											
6. Avg. Service	0.57	0.79	0.72	0.59	0.73	1.00										
7. Learning	0.13	0.32	0.34	0.24	0.29	0.39	1.00									
8. Enthusiasm	0.32	0.42	0.34	0.40	0.37	0.54	0.48	1.00								
9. Organization	0.21	0.47	0.41	0.34	0.33	0.52	0.43	057	1.00							
10. Group Interact'n	0.18	0.24	0.22	0.15	0.25	0.30	0.26	0.32	0.33	1.00						
11. Rapport	0.36	0.54	0.46	0.38	0.53	0.67	0.38	0.61	0.50	0.38	1.00					
12. Breadth	0.29	0.34	0.23	0.28	0.26	0.41	0.37	0.44	0.40	0.31	0.43	1.00				
13. Exams	0.24	0.34	0.33	0.19	0.28	0.40	0.34	0.42	0.43	0.33	0.44	0.35	1.00			
14. Assignments	0.17	0.25	0.21	0.21	0.15	0.29	0.30	0.33	0.48	0.29	0.38	0.29	0.38	1.00		
15. Workload	-0.07	-0.03	0.08	0.04	0.08	0.03	0.37	0.07	0.13	0.12	-0.02	0.16	-0.09	0.09	1.00	
16. Avg. Education	0.38	0.55	0.43	0.37	0.44	0.63	0.67	0.77	0.73	0.58	0.76	0.68	0.62	0.59	0.25	1.00

Table A13
Correlation of Service Quality and Instructional Quality Subscales for Observed Quality Responses

	SERVQUAL Subscales						SEEQ Subscales									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Tangibles	1.00															
2. Reliability	0.42	1.00														
3. Responsiveness	0.27	0.56	1.00													
4. Assurance	0.31	0.36	0.43	1.00												
5. Empathy	0.28	0.53	0.65	0.43	1.00											
6. Avg. Service	0.58	0.79	0.79	0.68	0.82	1.00										
7. Learning	0.30	0.41	0.43	0.43	0.47	056	1.00									
8. Enthusiasm	0.33	0.45	0.50	0.45	0.52	0.62	0.65	1.00								
9. Organization	0.29	0.55	0.58	0.47	0.50	0.65	0.62	0.72	1.00							
10. Group Interact'n	0.24	0.25	0.34	0.31	0.42	0.43	0.49	0.48	0.48	1.00						
11. Rapport	0.34	0.57	0.63	0.56	0.63	0.75	0.59	0.65	0.65	0.54	1.00					
12. Breadth	0.31	0.35	0.44	0.44	0.45	0.54	0.63	0.58	0.59	0.57	0.58	1.00				
13. Exams	0.25	0.37	0.44	0.42	0.37	0.51	0.55	0.50	0.57	0.48	0.59	0.53	1.00			
14. Assignments	0.22	0.35	0.40	0.36	0.35	0.46	0.54	0.48	0.60	0.49	0.55	0.46	0.52	1.00		
15. Workload	0.14	0.11	0.24	0.28	0.30	0.29	0.44	0.29	0.35	0.29	0.32	0.38	0.21	0.29	1.00	
16. Avg. Education	0.37	0.52	0.60	0.56	0.61	0.72	0.82	0.81	0.83	0.71	0.82	0.79	0.72	0.71	0.51	1.00

Appendix B

PRETEST INSTRUMENT

PRE-TEST RESPONDENT INSTRUCTIONS

Thank you Dr. _____. Good morning. My name is Keith Greiner and I am a doctoral student here at Drake University. I am conducting a study about the quality of services provided by university instructors and the quality of instruction you receive at the university. The study is divided into two parts. Today, we will complete questionnaires about your **expectations** from the academic services and instructional activities here at Drake. In November, I will bring another questionnaire about your experiences here at Drake. It will be important to match your responses today with your responses in November. So please be sure to enter the last four digits of your Social Security Number on the first page. Because you will be using only the last four digits of your Social Security Number, the information you provide will be anonymous. The instructors will not see your individual responses. If for any reason you are uncomfortable with a question, you may skip a question or you may stop answering the questions.

Keep in mind, the questions are about **all** classes and **all** instructors here at Drake University, and not specifically this class.

With the questionnaire is a form for you to sign. This form indicates your agreement to participate in the survey. If you would like to receive a copy of the results, please fill in your name and address on this form.

Please read all questions quickly, and carefully. Answer with the first response that comes to mind. When you are done, you may leave the questionnaire at your desk or place it in a box in the back. Please remain seated until everyone has had an opportunity to complete the survey. I'll let you know when it's 9:50 [11:50] and we will all leave at once.

Please remember we're talking about your expectations from **all** faculty and **all** classes here at Drake.

Thank you very much for participating. After today, I'll see you again in November. Have a great semester.

SERVICE QUALITY AND EDUCATIONAL QUALITY STUDY RELEASE

I understand the nature of this survey as described during class, and I agree to participate.

_____ _____

Your Signature date

REQUEST FOR A SUMMARY OF THE RESEARCH RESULTS

[ ] I would like to receive a summary of the study findings, and have entered my name and address for delivery of the summary.

Please print the following information if you wish to receive a summary of the study findings.

Name _____

Address _____

City _____ State _____ Zip Code _____

The faculty supervisor for this project is Dr. Thomas Westbrook, at the Drake University School of Education, 271-3078.

ACADEMIC SERVICE AND EDUCATIONAL QUALITY EXPECTATION SURVEY

YOUR ANSWERS ARE ANONYMOUS

Please fill in the blanks or check the most appropriate answer.

1. Last four Digits of Social Security Number XXX - XX - __ __ __ __

2. Major course of study _____

3. Sex [ ] Male [ ] Female

4. Age on December 30, 1999 _____

5. Is English your native language? [ ] Yes [ ] No

6. What year did you graduate from high school?

[ ] 1999
[ ] 1998
[ ] 1997
[ ] 1996 or earlier
[ ] Received a G.E.D.
[ ] Did not complete high school or G. E. D.

7. Currently enrolled [ ] Full-time [ ] Part-time

8. How many miles is this university from your permanent home?

[ ] 5 or less [ ] 6 - 10 [ ] 11 - 50 [ ] 51 - 100 [ ] 101 - 500 [ ] Over 500

SECTION 2

SERVICE AND EDUCATIONAL QUALITY EXPECTATIONS

Please circle the answer that that best describes your expectation of academic or instructional services provided by in all courses you take at Drake.

		Strongly disagree						Strongly agree
1.	College and university classrooms should have up-to-date equipment.	1	2	3	4	5	6	7
2.	Classrooms should be visually appealing.	1	2	3	4	5	6	7
3.	The instructors should be well dressed and appear neat.	1	2	3	4	5	6	7
4.	The appearance of the classrooms should be appropriate to the type of services provided.	1	2	3	4	5	6	7
5.	When instructors promise to do something by a certain time, they should do so.	1	2	3	4	5	6	7
6.	When students have problems, instructors should be sympathetic and reassuring.	1	2	3	4	5	6	7
7.	Instructors should be dependable.	1	2	3	4	5	6	7
8.	Instructors should provide services at the time they promise to do so.	1	2	3	4	5	6	7

		Strongly disagree						Strongly agree
9.	Instructors should keep their records accurately.	1	2	3	4	5	6	7
10.	Instructors should not be expected to tell students exactly when services will be performed.	1	2	3	4	5	6	7
11.	It is not realistic for students to expect prompt service from instructors of colleges and universities.	1	2	3	4	5	6	7
12.	College and university instructors do not always have to be willing to help students.	1	2	3	4	5	6	7
13.	It is okay if instructors are too busy to respond promptly to student requests.	1	2	3	4	5	6	7
14.	Students should be able to trust instructors of colleges and universities.	1	2	3	4	5	6	7
15.	Students should be able to feel safe, secure and comfortable in their transactions with colleges and university instructors.	1	2	3	4	5	6	7
16.	Instructors should be polite.	1	2	3	4	5	6	7
17.	Instructors should get adequate support to do their jobs well.	1	2	3	4	5	6	7
18.	Instructors should not be expected to give students individual attention.	1	2	3	4	5	6	7
19.	Instructors cannot be expected to give students personal attention.	1	2	3	4	5	6	7
20.	It is unrealistic to expect instructors to know the individual needs of the students.	1	2	3	4	5	6	7
21.	It is unrealistic to expect the instructors to have their students' best interest at heart.	1	2	3	4	5	6	7
22.	Instructors should not be expected to have operating hours convenient to all their students.	1	2	3	4	5	6	7

		Strongly disagree				Strongly agree
23.	The courses should be intellectually challenging and stimulating.	1	2	3	4	5
24.	You should learn something which you consider valuable.	1	2	3	4	5
25.	Your interest in the subjects should increase as a consequence of the courses.	1	2	3	4	5
26.	You should learn and understand the subject materials in the courses.	1	2	3	4	5
27.	Instructors should be enthusiastic about teaching.	1	2	3	4	5
28.	Instructors should be dynamic and energetic in conducting the courses.	1	2	3	4	5
29.	Instructors should enhance presentations with the use of humor.	1	2	3	4	5
30.	Instructors styles of presentation should hold your interest during class.	1	2	3	4	5
31.	Instructors explanations should be clear.	1	2	3	4	5
32.	Course materials should be well prepared and carefully explained	1	2	3	4	5
33.	Proposed objectives should agree with those actually taught so you know where the courses are going.	1	2	3	4	5

		Strongly disagree				Strongly agree
34.	Instructors should give lectures that facilitate taking notes.	1	2	3	4	5
35.	Students should be encouraged to participate in class discussions.	1	2	3	4	5
36.	Students should be invited to share their ideas and knowledge.	1	2	3	4	5
37.	Students should be encouraged to ask questions and should be given meaningful answers.	1	2	3	4	5
38.	Students should be encouraged to express their views.	1	2	3	4	5
39.	Instructors should be friendly toward individual students.	1	2	3	4	5
40.	Instructors should make students feel welcome in seeking help/advice in or outside of class.	1	2	3	4	5
41.	Instructors should have a genuine interest in individual students.	1	2	3	4	5
42.	Instructors should be adequately accessible to students during office hours or after class.	1	2	3	4	5
43.	Instructors should contrast the implications of various theories.	1	2	3	4	5
44.	Instructors should present the background or origin of ideas/concepts developed in class.	1	2	3	4	5
45.	Instructors should present points of view other than their own when appropriate.	1	2	3	4	5
46.	Instructors should adequately discuss current developments in the field.	1	2	3	4	5

		Strongly disagree				Strongly agree
47.	Feedback on examinations/graded materials is valuable.	1	2	3	4	5
48.	Methods of evaluating student work should be fair and appropriate.	1	2	3	4	5
49.	Examinations/graded materials should test course content as emphasized by the instructors.	1	2	3	4	5
50.	Required readings/texts are valuable.	1	2	3	4	5
51.	Readings, homework, etc. should contribute to an appreciation and understanding of the subject.	1	2	3	4	5
52.	I expect courses at this college or university to be equal or better in quality than other courses in my educational experience (High school or other colleges).	1	2	3	4	5
		Very Easy				Very Hard
53.	Course difficulty generally should be…	1	Easy 2	Medium 3	Hard 4	5
		Very slow				Very Fast
54.	Course pace generally should be…	1	Slow 2	Medium 3	Fast 4	5
		Very Light				Very Heavy
55.	Course workload, generally should be…	1	Light 2	Medium 3	Heavy 4	5

		1 to 5	2 to 5	5 to 7	8 to 12	over 12
56.	Hours of required study per week outside of class should be…	1	2	3	4	5
		Very Low	Low	Medium	High	Very High
57.	Level of interest in the subjects offered, prior to attending this college/university.	1	2	3	4	5
		Below 2.5	2.5 to 2.9	3.0 to 3.4	3.5 to 3.7	Above 3.7
58.	Overall high school grade point average.	1	2	3	4	5
		Freshman	Sophomore	Junior	Senior	Graduate
59.	Year in college.	1	2	3	4	5

Please use the following space to write any helpful suggestions you believe the researcher may find useful in understanding student expectations of academic service or instructional quality.

Thank you for completing the survey.

Please place it in the box marked for survey responses or leave it on your desk

Appendix C

POSTTEST INSTRUMENT

POSTTEST RESPONDENT INSTRUCTIONS

Thank you Dr. _____. Good morning. My name is Keith Greiner. In August, you completed the first part of this survey, and today, we will complete the second part.

This time, please complete the questions while **considering the experiences you have had during the last semester** here at Drake.

If for any reason you are uncomfortable with a question, you may skip the question or, you may stop answering the questions. When you are done, you may leave the questionnaire at your desk or place it in a box in the back. Please remain seated until everyone has had an opportunity to complete the survey. I'll let you know when it's 9:50 [11:50] and we will all leave at once.

Please read all questions quickly, and carefully. Answer with the first response that comes to mind.

Please remember we're talking about your experiences with from **all** faculty and **all** classes here at Drake

Thank you very much for participating.

ACADEMIC SERVICE AND EDUCATIONAL QUALITY EVALUATION SURVEY

YOUR ANSWERS ARE ANONYMOUS

Please fill in the blanks or check the most appropriate answer

1. Last four Digits of Social Security Number XXX - XX - __ __ __ __

2. Major course of study _____

3. What was your average grade in high school?

[ ] A or A+ [ ] A- [ ] B+ [ ] B [ ] B-

[ ] C+ [ ] C [ ] D [ ] Received a G. E. D. score of _____

4. What were your scores on the SAT or ACT?

SAT Verbal _____

SAT Math _____

ACT Composite _____

5. Citizenship status

[ ] U. S. Citizen [ ] Permanent resident [ ] Neither

6. During this semester, have you been employed in a job

[ ] Full-time [ ] Part-time [ ] Neither

SECTION 2
SERVICE AND EDUCATIONAL QUALITY EVALUATION

Please **circle** the number that best describes your **experiences** during the last semester. Please consider your experiences with **all** classes and **all** instructors.

		Strongly Disagree						Strongly Agree
1.	The university has up-to-date classroom equipment.	1	2	3	4	5	6	7
2.	The university's classrooms are visually appealing.	1	2	3	4	5	6	7
3.	The university instructors are well dressed and appear neat.	1	2	3	4	5	6	7
4.	The appearance of the classrooms of the university is appropriate for the type of service provided.	1	2	3	4	5	6	7
5.	When the instructors promise to do something by a certain time, they do so.	1	2	3	4	5	6	7
6.	When you have problems, the university instructors are sympathetic and reassuring.	1	2	3	4	5	6	7
7.	Instructors are dependable.	1	2	3	4	5	6	7
8.	The instructors provide services at the time they promise to do so.	1	2	3	4	5	6	7
9.	The instructors keep records accurately.	1	2	3	4	5	6	7
10.	The instructors do not tell students exactly when services will be performed.	1	2	3	4	5	6	7

		Strongly Disagree						Strongly Agree
11.	You do not receive prompt service from the university instructors.	1	2	3	4	5	6	7
12.	Instructors are not always willing to help students.	1	2	3	4	5	6	7
13.	Instructors are too busy to respond promptly to student requests.	1	2	3	4	5	6	7
14.	You can trust the instructors of the university.	1	2	3	4	5	6	7
15.	You feel safe, secure and comfortable in your transactions with the instructors.	1	2	3	4	5	6	7
16.	Instructors are polite.	1	2	3	4	5	6	7
17.	Instructors get adequate support from the university to do their jobs well.	1	2	3	4	5	6	7
18.	The instructors do not give you individual attention	1	2	3	4	5	6	7
19.	Instructors of the university do not give you personal attention.	1	2	3	4	5	6	7
20.	Employees of the university do not know your individual needs.	1	2	3	4	5	6	7
21.	The instructors do not have your best interests at heart.	1	2	3	4	5	6	7
22.	The instructors do not have operating hours convenient to all their students.	1	2	3	4	5	6	7

		Strongly Disagree				Strongly Agree
23.	The courses are intellectually challenging and stimulating.	1	2	3	4	5
24.	You have learned something which you consider valuable.	1	2	3	4	5
25.	Your interest in the subjects has increased as a consequence of the courses.	1	2	3	4	5
26.	You have learned and understood the subject materials in the courses.	1	2	3	4	5
27.	Instructors are enthusiastic about teaching.	1	2	3	4	5
28.	Instructors are dynamic and energetic in conducting the courses.	1	2	3	4	5
29.	Instructors enhance presentations with the use of humor.	1	2	3	4	5
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34.	Instructors give lectures that facilitate taking notes.	1	2	3	4	5

		Strongly Disagree				Strongly Agree
35.	Students are encouraged to participate in class discussions.	1	2	3	4	5
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51.	Readings, homework, etc. contribute to appreciation and understanding of the subject.	1	2	3	4	5
52.	Courses at this college are equal or better than other courses you have taken in your educational experience? (High School, other colleges).	1	2	3	4	5
		Very Easy				Very Hard
53.	Course difficulty generally was ...	1	Easy 2	Medium 3	Hard 4	5
		Too slow		About Right		Too Fast
54.	Course pace generally was...	1	Slow 2	3	Fast 4	5
		Very Light				Very Heavy
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		1 to 5	2 to 5	5 to 7	8 to 12	over 12
56.	Hours of study per week required outside of class.	1	2	3	4	5
		Very Low	Low	Medium	High	Very High
57.	Level of interest in the subjects offered, prior to attending Drake.	1	2	3	4	5
		Below 2.5	2.5 to 2.9	3.0 to 3.4	3.5 to 3.7	Above 3.7
58.	Expected grade point average at this institution.	1	2	3	4	5

Please use the following space to write any suggestions you believe the researcher may find useful in understanding student experiences of academic service or instructional quality.

Thank you for completing the survey.

Please place it in the box marked for survey responses or leave the questionnaire on your desk